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KIRTLAND'S WARBLER (*DENDROICA KIRTLANDI*).

BY FRANK M. CHAPMAN.

Plate IV.

THE activity of field ornithologists during the past fifteen years has deprived most North American birds of the distinction of being termed rare. Species which a score of years since were known from only two or three specimens are now represented in collections by large series, continued research showing that their supposed rarity was due to our ignorance of their true range. Particularly is this true of the Warblers, birds whose habits make them especially difficult to observe; but one by one enthusiastic collectors have discovered their habitat, nests and eggs, until of all the North American members of this family, with the exception of several Mexican species just reaching our border, we can now write 'rare; nest and eggs unknown,' only of Kirtland's Warbler.

Forty-six years have passed since Kirtland's Warbler was made known to science. During this time nineteen specimens have been recorded from the United States and fifteen from the Bahamas. In addition to these specimens there exist thirty-three Bahaman specimens collected by C. J. Maynard making, as far as I can ascertain, a total of sixty-seven examples. A study

of the data attached to these birds fixes with considerable certainty the winter distribution of this species and throws some light on its routes of migration and probable breeding range.

Thus during the winter Kirtland's Warbler apparently ranges throughout the Bahamas, having been found from Caicos to Abaco, though it has not as yet been recorded from Inagua. Its northward migration begins in April, South Carolina being reached toward the end of the month, either by direct flight from the Bahamas, or, what is more probable, by advancing northward along the Southeast Atlantic Coast (St. Helena, April 29, Worthington).

This is the most northern, spring cis-Alleghanian record, the migratory route of the species now leading it northwestward into the Mississippi Valley.

It is reported from Missouri, May 8 (St. Louis, Widmann); from Illinois, May 7 (Glen Ellyn, Gault); from Indiana, May 4 and 7 (Wabash, Wallace); from Ohio, May 12 and 13 (Cleveland, Pease and Chubb; four other Ohio specimens without exact date); from Minnesota, May 13 (Minneapolis, Guilford), and from Michigan, May 11 (Battle Creek, Green), May 15, 16 (Ann Arbor, Covert; also one specimen ~~about~~ May 1? Knapp), and May 21 (Mackinac, Marshall). This last is not only the latest spring record but also the most northern record we have of the species. The specimen on which it is based was killed by striking the lighthouse situated at the Straits of Mackinac and, as I have before suggested, was doubtless *en route* to a more northern breeding ground in the Hudson Bay region.

In the fall we have only two records for Kirtland's Warbler (Ft. Myer, Va., Sept. 25, Palmer, and Chester, So. Car., Oct. 11, Loomis), suggesting that the species returns to its winter quarters over much the same route it selects for its northwestward journey in spring.

Few of the ornithologists who have been so fortunate as to secure specimens of this rare Warbler have given us any account of its habits. Mr. Cory, however, states of a specimen he secured on Andros Island: "Its actions much resembled those of *D. coronata*, and it seemed to prefer thick brush." Mr. Widmann compares it to *D. palmarum* and says that it has the

wagging motion of the tail, so characteristic of that species, that it appears to be terrestrial, and in the carriage of its body and manner of evading discovery by skilfully alighting behind a protecting object, it resembles *Geothlypis agilis*. Messrs. Smith and Palmer also mention the bird's habit of tail-wagging. Mr. W. O. Wallace states that the specimen secured at Wabash, Ind., May 4, was an active flycatcher, while the song of a second specimen consisted of "a loud, ringing note, repeated three times in quick sucoession. . . . . It is loud and rather musical."

In addition to these records of collectors of the species we have several others by ornithologists who have observed but not secured it. Mr. Walter Hoxie states[1] that on St. Helena Island, South Carolina, May 3, when without his gun, he saw three Kirtland's Warblers, and gives his observations on their song and actions, as follows: "They were quite familiar, allowing me to approach cautiously within less than a rod. . . . The notes are of two distinct characters. The first, a song, was uttered with the head held forward and body quite erect. It bore a striking resemblance to the song of the Yellow-throated Warbler. The second was a loud chipping, uttered while moving about among the bushes, and was kept up for a space of one or two minutes at a time. Resting a few seconds the bird would begin again, creeping about the branches and 'swapping ends' with a quick jerking movement all the time. Arriving near the top of the bush or the end of the branch he would settle himself and sing two or three times before fluttering to the next bush. All these specimens were in low bushes and seemed to prefer them to trees . . . . neither did I see any of them alight on the ground."

Mr. L. S. Keyser, who observed a specimen of Kirtland's Warbler "one day in early spring" (locality not stated, but presumably in Ohio), describes its song as "a blithe, liquid melody," the tones being "full, clear and bubbling." (Bird-Dom, p. 63).

These brief notes constitute our sole knowledge of the habits of this species, whose nest and eggs, owing to its rarity and the remoteness of its probable breeding range, will doubtless long remain unknown.

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[1]Auk, III, 1886, 412.

LIST OF RECORDED CAPTURES OF KIRTLAND'S WARBLER.

1852. BAIRD S. F. *Ann. Lyc. Nat. Hist. N. Y.* V, 1852, 216, pl. vi.— Male, collected by Charles Pease, May 13, 1851, near Cleveland, Ohio.

Original description, wherein Prof. Baird dedicated the bird to J. P. Kirtland of Cleveland, not because he collected it, as has been uniformly but incorrectly stated, but because to him "we are indebted for a knowledge of the Natural History of the Mississippi Valley."

1860. KIRKPATRICK, J. [?]. *Ohio Farmer*, IX, 1860, 179.—Collected by — Darby, May (?), 1860, Cleveland, Ohio. A specimen is also said to have been shot by Wm. Case but to have been too badly injured to be preserved. (See Wheaton, Birds of Ohio, 264).

1865. BAIRD, S. F. *Rev. N. A. Birds*, 206.— Collected by S. Cabot, Jr., at sea, near Abaco, Bahamas.

This specimen was doubtless in existence ten years before the discovery of the type, having probably been secured by Cabot on his voyage to Yucatan about 1840.

1877. LANGDON, F. W. *Cat. Birds Vicinity Cincinnati, O.* (Salem, Mass.) 6.— Male, collected by C. Dury, May 1872, Avondale, O.

1879. WHEATON, J. M. *Bull. Nutt. Orn. Club*, IV, 1879, 58.— Two specimens collected at Rockport, Cuyahoga Co., O., "during past season," by W. and J. Hall.

1879. CORY, C. B. *Bull. Nutt. Orn. Club*, IX, 1879, 118.— Female collected on Andros Island, Bahamas, Jan. 9 (1879?).

1879. PURDIE, H. A. *Bull. Nutt. Orn. Club*, IV, 1879, 185.— Two females collected by A. B. Covert, Ann Arbor, Michigan, May 15, 1875, and May 16, 1879, respectively.

1880. LANGDON, F. W. *Journ. Cin. Soc. Nat. Hist.* 1880, 123.— Female, collected by H. E. Chubb, Cleveland, Ohio, May 12, 1880.

1884. RIDGWAY, R. *Auk*, I, 1884, 389.—Male, collected by N. Y. Green, Battle Creek, Michigan, May 11, 1883.

1885. MERRIAM, C. H. *Auk*, II, 1885, 376.— Male, collected by Wm. Marshall, Straits of Mackinac, Michigan, May 21, 1885.

This is the most northern record for the species. The bird was killed by striking the lighthouse on Spectacle Reef, and was doubtless therefore *en route* to a more northern locality.

1885. WIDMANN, O. *Auk*, II, 1885, 382.— Male, collected at St. Louis, Missouri, May 8, 1885.

1886. HOXIE, W. *Auk*, III, 1886, 412.— Male, collected by W. W. Worthington, St. Helena, South Carolina, April 27. Also mentions 3 individuals observed by himself, May 3, but not secured.

1888. SMITH, H. M., and PALMER, W. *Auk*, V, 1888, 148.—Collected by Wm. Palmer at Ft. Myer, Virginia, September 25, 1887, where a second example was seen but not secured one week later.

1888. JENNINGS, A. H. *Johns Hopkins University Circular*, Vol. VII, No. 63.—Male, collected at New Providence, Bahamas, April 18, 1887.

1889. LOOMIS, L. M., *Auk*, VI, 1889, 74.—Collected at Chester, South Carolina, Oct. 11, 1888.

1889. WASHBURN, F. L. *Auk*, VI, 1889, 279.—~~Female~~, collected by—Knapp, at Ann Arbor, Michigan, about May 1, 1888.

1891. CORY, C. B. *Auk*, VIII, 1891, 295, 297, 298.—Three specimens, collected on Berry Islands, Bahamas, April, 1891; two specimens collected by C. L. Winch in January or February on Caicos Island, Bahamas; also recorded as collected by C. L. Winch on Abaco, Bahamas, in March.

1891. RIDGWAY, R. *Auk*, VIII, 1891, 337, 338. Four specimens, collected by naturalists of the Fish Commission S. S. 'Albatross,' on Wattling's Island, Bahamas, March 4–9, and two by same collectors on Green Cay, Bahamas, April 12.

1893. GUILFORD, H. M. *Auk*, X, 1893, 86.—Male, collected at Minneapolis, Minnesota, May 13, 1892.

1894. GAULT, B. T. *Auk*, XI, 1894, 258.—Male, collected at Glen Ellyn, Illinois, May 7, 1894.

1897. BUTLER. A. W. *Birds of Indiana, Report of State Geologist*, 1897, 1070.—Two specimens, collected by W. O. Wallace at Wabash, Indiana, May 4, 1892 and May 7, 1895, respectively.

In addition to the 18 or more[1] specimens herein recorded from the Bahamas, I have received a list of 33 specimens of this species collected in these islands by Mr. C. J. Maynard, which I append: Nassau, N. P., 1884, Feb. 1, one; 12, two; 13, two; 20, one; 27, two; March 1, one; 11, one; 13, one; 15, two; 17, two; 22, two; 24, one; 26, three; 29, one; 1893, March 25, one; April 2, one; 1897, March, one; 4, one; April 5, one; 6, two.

Eleuthera Island, April 20, two; 22, one.

Athels Island, May 5, one.

NOTE.—Since this paper was put in type we have received from Mr. C. B. Cory a note recording the occurrence of Kirtland's Warbler at West Jupiter, Florida, in April, 1897, one example being seen on the 19th and one captured on the 27th of that month. See 'General Notes,' this issue of 'The Auk.'

[1] One record indefinite.

CANON XL, A. O. U. CODE.

BY D. G. ELLIOT, F. R. S. E.

THE CODE formulated by its Committee, and adopted by the American Ornithologists' Union has deservedly received the general approval of naturalists, not only of those devoted to the particular science for which it was prepared, but also of those whose attention has been directed to other lines of zoölogical research. And while all zoölogists may without reserve and with great profit to themselves cheerfully adopt and assist in maintaining the general doctrine and special precepts embodied in the Code, yet unhappily we find, like all human productions, it has its element of weakness which, in the opinion of a considerable number of naturalists, seriously impairs the general effectiveness of its armor of proof. Amid so much that is excellent and conceived in judicial equity upon the broadest and fairest foundations, it is somewhat amazing to find that in one of its most important articles a premium is offered as a reward to ignorance, carelessness, and a general lack of ability to perceive that which alone is proper and right. To spell correctly is the first qualification of any one claiming to have received an education, and one who is unable to do this should not be encouraged to commit errors by the assurance of a committee of a scientific society that his faults should be made perpetual, and that all the efforts of those competent to correct his blunders should be resisted to the utmost by the fulmination of this extraordinary Canon XL of an otherwise excellent codification of rules. The writer imputes to those responsible for this Canon, only the best and purest motives, an honest effort to establish a fixity of nomenclature, and if in the course of this paper his remarks may appear almost too earnest in his criticism of a proposition which he regards as a huge mistake and one apt to create more instability in scientific nomenclature than any injury the abuse !!! of all the purists and classicists in the world could effect, yet he believes at the time this article was formed the majority of the committee considered they were acting in the true

line of advancement and scientific progress. This acknowledgment, however, only emphasizes the fact that even good men can go very widely astray.

Let us look at this Canon XL and see what are the reasons adduced why errors should be permanent and all efforts to correct them and in many cases cause terms that are simply gibberish to assume shapes possessed of intelligent meanings, be frustrated. The great and only evil feared is "the abuse on the part of the purists and classicists who look with disfavor upon anything nomenclatural which is in the least degree unclassical in form" and therefore, it continues, as may be naturally inferred from the rule that follows, let us place the results of ignorance and carelessness beyond the reach of such learned marplots, so that no blunders may ever again be corrected, and in this way we will achieve an eternal stability in our nomenclature! And so, if when the genus *Somateria* was first proposed, some printer's devil with a catarrhal affliction had caused it to appear as 'Sobaberia,' under the dictum of this enlightened and highly classical Canon that extraordinary combination must remain forever as the author's idea of expressing a downy or woolly body! Of course refuge might be taken in the provision afforded in Canon XL that typographical errors had been committed and therefore the spelling might be corrected; but this opens a very wide door for the exercise of individual opinion, and unless an author's original MS. was accessible, proof for or against this fact could not be produced. And in reference to this point so little has the Committee believed in the fact that typographical errors exist, that the writer is able to recall very few instances where on this account any word has been corrected by it. No doubt every one who has any knowledge of the matter, whether or not he belongs to the reprehensible and excommunicated bodies of purists and classicists, is convinced that σωμα and ἔριον never could properly compose 'sobaberia' neither could πεδιον and οικέτης be correctly compounded into *Pediocætes*, two blunders in one word; yet the latter is solemnly adjudged by this wise and strictly educational Article to be the only proper way of spelling the generic term for the Sharp-tailed Grouse!

Is not this terror of the amount of damage these dreadful pur-

ists and classicists may commit, who in the timid minds of the majority of this Committee, as originally composed, are rightly enough ever ready to overthrow nonsense words, and bring to the fold in their proper shapes, ungrammatical terms, rather strained and manufactured for the occasion? Is there such a preponderance of ill-spelled words, and ill-formed compounds in ornithological nomenclature as would overthrow it if corrected? Is it such a dreadful misfortune to be put right when one has gone astray? And would chaos and confusion arise if occasionally a 'purist' or a 'classicist' should have the temerity to point out to an erring brother the faults that he in his happy unconsciousness of evil had committed? Did the authors of this article stop to consider what effect it would have upon those same purists and classicists? Did they for a moment suppose that these malevolent creatures, imbued, as the gentlemen of this Committee rightly supposed, with a settled antagonism to wrongdoing wherever it might exist, would meekly surrender their opinions and renounce their conviction that right is right and error is error wherever found, and become advocates of the holiness of blunders at the command or teachings of this article? And if they did not do this, where is the stability of nomenclature so much desired?' For the writer is happy to think there are more 'purists and classicists,' that is to say, educated men, to-day devoted to scientific ornithology, than there are of that class, who, in good faith but in all ignorance, commit the blunders that so sorely need correcting.

For only one cause may an error be made right under the Canon introducing this rule, viz.:—when "a typographical error is evident." Who is to determine this? Must all such apparent faults be submitted to this committee for their decision as to whether the error is a typographical one or an author's misspelling? And suppose one has the audacity to form his own opinion from as good evidence as that at the disposal of the Committee, who is likely to be right if they disagree, and what is to be done with the obdurate (of course not with the Committee, Oh, no!) if he persists in his wilful way? It is amazing in these days of public schools and general knowledge that a committee of a scientific society should solemnly announce as it does in this Canon that "correctness of structure or philological propriety be

held as of minor importance and yield place to the two cardinal principles of priority and fixity," or in other words that the ability to spell properly or to write grammatically is of no consequence beside a Utopian effort to maintain a stability that is not stable and never can be under the teachings this article would inculcate. The writer understands perfectly well that Canon XL, as well as all the others in the Code, is not mandatory, the Committee would not for a moment consider them as presented to ornithologists in that spirit, but offered for their consideration as the best it was able to do in its judgment under the circumstance. All philological emendations are rejected, especial stress being placed on the change of the initial letter of a name, as when the Greek aspirate has been omitted, so that if it was English the Cockney pronunciation of 'Enery' instead of Henry would be preferred if it only was first printed. And here perhaps it may be well to say something about the law of propriety in reference to this subject. It is very difficult to see in what way it could possibly be affected. The misspelt word or ungrammatical phrase when corrected would still be accredited to the original author. It is yet his child, even if its clothes do fit it better and give it a more respectable appearance, and no one else is likely to pose as its father, even if he had a hand in tidying it up a bit.

Now let us come to the conclusion of the whole matter: This rule has been in *print*, it cannot be said in *force*, for nearly fifteen years. Has it accomplished the result contemplated or desired? Is nomenclature by its assertions a greater fixity to-day than when this rule was promulgated? Do those who know better accept bad spelling and employ ungrammatical phrases, because it advises them so to do? We know they do not. Has it made any converts among educated men, or has it been of any assistance to those not educated save to encourage them to continue in the valley and shadow of ignorance? The doctrine it teaches is unworthy this age and the source from which it had its being. It has utterly failed to accomplish its purpose, and should be dropped from the Code. It is satisfactory to know that one at least of the Committee that assisted at the advent of its unlovely offspring, born out of due season, did not at the time, although an accomplished accoucheur, regard with favor this result of combined

efforts, and Dr. Coues of late both with tongue and pen has expressed his disapproval of this article and advocated its suppression. Let it therefore be eliminated from the Code. Let us instead of listening to its baneful teachings, advocate the beauties of grammatical construction, and the propriety of correct spelling and we will do more towards the stability of ornithological nomenclature than any number of Canons XL, which teach the rightfulness of wrongdoing. The writer has always repudiated this Canon. He will always spell as well as he knows how, and will be as grammatical in his writings as he is able and will always reject misshaped compounds and ill-spelt words, and when he errs and blunders he is thankful to the kind friend who sets him right upon his way, and he would strongly advise all young ornithologists, beginning the study of the most attractive of earth's creatures, to reject entirely this Canon XL and its advocacy of illiteracy, and when uncertain of any portion of their writings consult some one who can aid them, but in all cases, adopt only that which is grammatically, typographically and philologically correct.

A DEFENSE OF CANON XL OF THE A. O. U. CODE.

BY J. A. ALLEN.

IN THE foregoing article Mr. Elliot has, let us say unwittingly, given a very unfair representation of the purpose and results of Canon XL of the A. O. U. Code of Nomenclature. The members of the A. O. U. Committee who formulated Canon XL, instead of deliberately offering "a reward to ignorance, carelessness, and a general lack of ability to perceive that which alone is proper and right," are probably as much shocked by misspelled or wrongly constructed names in scientific nomenclature as is Mr. Elliot, and did not adopt Canon XL without careful deliberation and consideration as to which of two grave evils is the lesser,—

namely, the emendation of thousands of names, some of them so radically that they retain little resemblance to their original forms, or the retention of a few gross and shocking verbal malformations against which their literary instincts must ever revolt.

In the formation of the A. O. U. Code stability in nomenclature was the primary end sought, which is the avowed purpose of all modern codes of nomenclature; and the authors of this code find themselves in most excellant company in the stand taken on the subject of emendation of names. They include a long list of authors who are eminent as scholars as well as naturalists, and "who know how to spell" in quite as many languages as Mr. Elliot and his few sympathizers in the matter of this "extraordinary" Canon XL. To charge the A. O. U. Committee with placing a premium on illiteracy through the adoption of Canon XL, as Mr. Elliot and Dr. Coues have done, is almost too absurd for serious consideration, as the article itself and the discussion and remarks thereunder abundantly show, to say nothing of the eight pages or more of the Code (pp. 58–66) devoted to 'Recommendations for Zoölogical Nomenclature in the Future,' treating especially of the selection and construction of names. Under Canon XL it is said: "The permanence of a name is of far more importance than its signification or structure, as is freely admitted by the best authorities in both Botany and Zoölogy. Your Committee therefore restrict the emendation of names to the correction of obvious or known typographical errors .... They would therefore reject emendations of a purely philological character, and especially all such as involve a change of the initial letter of the name, as in cases where the Greek aspirate has been omitted by the original constructor. It therefore follows that hybrid names [anagrams, 'nonsense names,' and barbarous or 'exotic' names] cannot be displaced; although it is to be hoped that they will be strenuously guarded against in future; and that, in general, word-coiners will pay the closest attention to philological proprieties."

Nearly all modern codes of nomenclature agree that "A name is only a name and need have no necessary significance." In other words, while anagrams, hybrid names, nonsense names (many such have been purposely constructed), and barbarous

or indigenous names should be avoided in future, those already in existence are not to be either rejected or emended, but treated as simply "arbitrary combinations of letters."

On the other hand, extremists of the school Mr. Elliot represents will tolerate only words of classical origin, or at least of Latin form, and of correct philological construction. One might infer from Mr. Elliot's remarks that this correct philological form was a very simple matter to attain; that there was but one allowable rule for transliteration from other languages into Latin; that all scholars who "know how to spell" are agreed on the proper methods of compounding names under all circumstances; that philological authorities were never at loggerheads as to the correct construction of names of doubtful etymology (of which there are many); and that emended and re-emended emendations were never heard of. Simple indeed, were all this true, would be this troublesome matter of "knowing how to spell" in a manner to please everybody.

Between the rejection of names on account of their non-classical origin, the emendation of classical terms improperly constructed, even to their complete transformation to practically new words, and the thousand and one slighter changes that do not to any material extent alter the original word, there is no point at which a line can be drawn — the whole field is thrown open to individual predilection, with no arbiter to decide between conflicting authorities, and no prospect of agreement in tastes or preferences, where more constructions than one chance to be allowable. Mr. Elliot may prefer one 'spelling,' Dr. Coues another. The result would be endless emendation and constant instability, each 'good speller' following his own preferences as to whether or not a name is too bad to be tolerated, or whether it may not be accepted after the proper amount of "tidying up." In many cases it is purely a matter of choice, as custom goes, whether a certain word from the Greek shall be spelled with a *c* or a *k*, an *i* or a *y*, an *i* or a *j*, etc; while the etymology of many terms of questionable meaning and construction is a matter of pure guesswork.

The extent of the breach advocated by Mr. Elliot is probably far greater than he supposes. Mr. Waterhouse's 'Index Generum Avium,' published in 1889, gives a list of about 7000 names

employed as generic or subgeneric terms for birds between this date and 1766. A careful examination of the first 60 pages of the work (about one fourth) shows that about one eighth of the names there entered are merely variants or emendations of other names, while very many other variants have here escaped record. It also appears that some names have received as many as three or four renderings at the hands of as many expert 'spellers'; that in some cases the same author has spelled names of his own coining in two and sometimes in three different ways; in one instance, at least, using the masculine, in another the feminine, and in still another the neuter form of the word; that German and French writers have apparently certain national preferences in respect to the transliteration of Greek into Latin; that some prefer the full or expanded form in compounding names and others an abridged form, for the sake of brevity. Thus we have *Anthreptes*, *Anthorheptes*, *Anthothreptus*, and *Anthothreptes*; *Anodorhynchus* and *Anodontorhynchus*; *Baryphonus* and *Barryphonus*; *Bessornis* and *Bessonornis*; *Bradornis* and *Bradyornis*; *Calornis* and *Calliornis*; *Calurus* and *Calliurus*; *Caliptorhynchus* and *Caliptorrhynchus*; *Calopsitta* and *Callipsittacus*; *Cephalepis* and *Cephallepis*; *Cephus* and *Cepphus*; *Chroicocephalus*, *Chræocephalus*, and *Croocephalus*, etc. But space cannot be given, nor is it necessary, for the further illustration of this and other cases where custom varies in respect to connective vowels, the doubling of consonants, as *l* and *r*, or the interchange of *ai*, *æ*, and *œ*, of *i*, *y*, and *j*, or of *c* and *k*, or the retention or the omission of the Greek aspirate, etc.

Aside from these simple classes of variants, affecting probably at least an eighth of all the generic and specific names in zoölogy, the 'purist,' like certain German and some other authors that could be named, totally rejects not only hybrid names and names consisting of arbitrary combinations of letters, but all names based on indigenous appellations, as the native names of animals. To show what changes this implies, it may be stated that in the Psittaci alone the names of not less than 15 genera and subgenera out of a total of 72, were rejected not long since by a single author on the ground of faulty construction or barbarous origin, in several cases new names being given in place of the

name rejected, and in other cases the earliest synonym that chanced to meet the author's approval was taken.

It was to avoid this uncertainty and instability that Canon XL was devised, which in reality is only the enforcement of the law of priority, literally as well as in spirit, to its finality, applying it to the *form* of the name as well as to the name itself. There can be no safe line of limitation in the case of emendation, where there are so many who pose as good spellers and yet so often spell the same name differently. In the only exception made — that of "obvious or known typographical errors" — the critics of Canon XL profess to see a great absurdity, although its meaning is sufficiently defined. By 'obvious' is of course meant the evident transposition of letters, or their inversion, overlooked in proof-reading; by 'known' cases where the error, clerical or typographical, has been corrected by the author himself, either later in the same publication, as in the index or by means of an errata slip, or elsewhere. The exception thus does not open "a very wide door for the exercise of individual opinion," nor are the known cases of such errors so rare as Mr. Elliot seems to suppose.

Mr. Elliot asks regarding Canon XL: "Has it accomplished the result contemplated or desired? Is nomenclature by its assertions a greater fixity to-day than when this rule was promulgated? Do those who know better accept bad spelling and employ ungrammatical phrases, because it advises them so to do?.... Has it made any converts among educated men?" etc. In answer it may be said that it has not accomplished all that was desired, but far more in the line of its realization than its most sanguine advocates dared hope. It has practically thus far rendered fixed and permanent the nomenclature of North American ornithology, in North America at least, in so far as the emendation or rejection of names upon purely philological grounds is concerned. It has among its supporters and advocates so nearly all of the leading authorities in vertebrate zoölogy in this country (they must include *some* "educated men") that the few who reject this rule, like Mr. Elliot and Dr. Coues, are conspicuous by reason of their exceptional position. Not only this, but converts have been made in this country in other departments

of zoölogy, and its adherents include some eminent, and even "educated" naturalists abroad. Neither is it evident that its "baneful teachings" and "advocacy of illiteracy" have had, to any perceptable degree, any demoralizing influence upon the rising generation of naturalists, or perceptably deteriorated the quality of their spelling when it has fallen to their lot to coin new names for the designation of newly discovered genera and species.

Because the acceptance of Canon XL is not universal among naturalists is no reason for its elimination from the Code; the progress it has made and the good that has already resulted from it is rather something for which we should be grateful. It is of course not compulsory, as no such rule can be arbitrarily enforced; nor can Mr. Elliot ever expect that any rule for even such a simple matter as the transliteration of Greek and other names into Latin, to say nothing of the construction of names according to undeviating methods, will ever be in universal use. It is even "Utopian" to expect all good spellers to spell alike. Therefore we may well rest content to tolerate in our Check-List a few malformations like *Leptotila* and *Pediocætes*, and even such an inept name as *cafer* for an American bird, than to open wide the door to the vacillating sway of the horrified emender.

DESCRIPTION OF A NEW NORTH AMERICAN THRUSH.

BY HARRY C. OBERHOLSER.

THE OLIVE-BACKED THRUSHES inhabiting the Rocky Mountain region of the United States prove to be subspecifically separable from the eastern race, to which they have heretofore been referred. The name *swainsonii* has undoubted application to the form from eastern North America, since Cabanis states[1] the habitat of the

[1] Tschudi's Fauna Peruana, 1845-6, 190.

bird named by him to be northeastern North America, casually Peru, and furthermore evidently describes a specimen taken by himself during October, in New Jersey, which place may consequently be taken as the type locality. The *Turdus minimus* of Lafresnaye,[1] if belonging here at all, probably refers to the eastern race, though its status cannot be determined with certainty. Swainson and Richardson's description of their *Merula wilsonii*[2] probably belongs also to the eastern form, though even were such not the case the name would still be unavailable, being merely a misidentification of their bird with the *Turdus wilsonii* of Bonaparte (=*fuscescens* of Stephens). All other synonyms apply unequivocally to the eastern race, and the bird from the Rocky Mountain region being thus without a name, may be called

Hylocichla[3] **ustulata almæ**, subsp. nov. ALMA'S THRUSH.

CHARS. SUBSP.— *Hylocichla H. u. swainsonii persimilis, sed notaeo hypochondriisque canescentioribus.*

Geographic Distribution.— Rocky Mountain region of the United States, west to Utah and eastern Nevada; in winter south to Mexico, and east, sporadically, to Indiana.

Description.— Type, male adult, No. 159053, U. S. National Museum, Biological Survey Collection; East Humboldt Mts., opposite Franklin Lake, Nevada, June 24, 1898; H. C. Oberholser. Upper parts hair brown, with a slight tinge of greenish; just a shade darker and browner on forehead and crown; tail fuscous, the central feathers and external webs of all the rest identical in color with the back; wings fuscous, the lesser and median coverts, with outer edgings of all the other feathers, like the upper surface of the body; basal portion of inner webs of secondaries and innermost primaries buffy. Lores, eye-ring, cheeks, jugulum and sides of neck buff, the lores, cheeks and auriculars much mixed with brownish, the jugulum, sides of neck, and sides of throat with more or less triangular spots of dark brown; a dark brown sub-malar streak; chin and middle of throat buffy white, almost immaculate; remainder of lower parts white, the sides and flanks brownish gray, the breast spotted with same color; under wing-coverts fuscous, edged with buff. Wing, 96 mm.; tail, 74 mm.; exposed culmen, 11.5 mm.; tarsus, 28 mm.

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[1] Rev. Zool., XI, 1848, 5.

[2] Fauna Boreali-Americana, II, 1831, 182.

[3] *Hylocichla* seems to be a perfectly good genus. The long tarsi, and broader, more depressed bill distinguish it sufficiently from *Turdus*, which thus becomes restricted to the Old World.

Young in first plumage, sex unknown, No. 136318, U. S. Nat. Mus., Biological Survey Collection; Thompson Falls, Montana, Aug. 1, 1895; V. Bailey. Above greenish olive, most of the feathers, except on the lower back and rump, with shaft markings of buffy, these smallest on the head; upper tail-coverts broadly tipped with ochraceous; tail and wings fuscous, with edgings of greenish olive, the median coverts with shaft spots of buffy; sides of head buffy mixed with brownish; throat and jugulum pale buff, heavily marked with blackish; rest of lower surface dull white, with transverse markings of dark brown, these larger and darker anteriorly, the sides and flanks washed with brownish.

The present race differs from the eastern *Hylocichla ustulata swainsonii* in the more grayish, less olivaceous color of the upper surface, this being usually most noticeable on the rump and upper tail-coverts. The sides and flanks also average more grayish. No apparent difference in size exists. No comparison with *H. ustulata* proper is necessary, for *Hylocichla u. almæ*, although geographically intermediate, is even less closely allied to *ustulata* than is *swainsonii*.

Olive-backed Thrushes from western British America and the interior of Alaska, while not perfectly typical, are nearer *swainsonii* than to *almæ*. Montana, Colorado and Texas have both forms during migration, as the specimens at hand attest. Two examples collected by Mr. E. W. Nelson on the Tres Marias Islands, western Mexico, are typical *almæ*; but this form has not been traced farther south than the Isthmus of Tehuantepec, unless an intermediate specimen from Costa Rica be considered sufficient evidence. Two birds from Vincennes, Indiana, with one other from Wheatland, in the same State, apparently must be referred to *almæ*, for they are absolutely indistinguishable from western examples.

Young birds of *H. u. almæ* appear to be usually more greenish olive than those of *swainsonii*, though this is not diagnostic.

Alma's Thrush is a common bird in eastern Nevada, where it inhabits the growth of trees and bushes that fringes the mountain streams. In the Monitor and East Humboldt Mountains, it is apparently the most numerous species of the family.

The following list of localities from which specimens have been examined will give a fair idea of its range, breeding birds being indicated by an asterisk:

Montana.— Flathead Lake*; Mystic Lake*; Dry Creek*; Thompson Falls*; Fort Custer.
Colorado.— Clear Creek*; Twin Lakes*; Denver; Colorado Springs.
South Dakota.— Hill City.
Wyoming.— Fort Laramie; Fort Bridger.*
Utah.— Parley's Park.*
Nevada.— Mountain City*; East Humboldt Mts.*
Texas.— San Antonio.
Indiana— Vincennes; Wheatland.
Mexico.— Maria Madre, Tres Marias Islands; Japana, Oaxaca.

The writer is indebted to Dr. C. Hart Merriam for use of the collection of the Biological Survey, and to Mr. Robert Ridgway for access to National Museum material.

THE SUMMER BIRDS OF SAN MIGUEL COUNTY, NEW MEXICO.

BY WALTON I. MITCHELL.

THE territory covered by this article includes the cities of Las Vegas and East Las Vegas and numerous trips all over the county, in the mountains, far from civilization. The altitude of the country varies from 6,000 to 12,000 feet, and the climatology in the summer months is very similar to that of the Pacific Coast region, the days being warm but not close, the nights cool. The rainy season begins the first of June, lasting through July into August, the rain coming about eleven A. M. and clearing up about one P. M., the remainder of the day being clear and bright, as a rule. The county is watered by the Gallinos and Pecos Rivers and numerous other small streams, none large enough to be called 'creeks' in the East.

The vegetation consists mostly of pine and spruce and scrub oak, also greasewood, cactus, and quaking aspens and cottonwoods in a few localities. Migration is completed by the 15th of May, most summer residents arriving between April 10 and May 1.

I append short notes on species observed from January to the last week in June, 1898.

1. **Colymbus nigricollis californicus.** AMERICAN EARED GREBE.—Rare. One pair breeding on a small alkali lake at an altitude of 7,000 feet. The only pair observed, but I am informed they are occasionally met with throughout the county.

2. **Anas carolinensis.** GREEN-WINGED TEAL.—Tolerably common. Breeds through the eastern part of the county. Common during migration, as is also the Blue-wing, which does not remain to breed.

3. **Plegadis guarauna.** WHITE-FACED GLOSSY IBIS.—Not uncommon on the small lakes in the southern part of the county. More common in the southern part of the territory, but only met with in certain localities in this county.

4. **Botaurus lentiginosus.** AMERICAN BITTERN.—Rare. One specimen, killed on June 7 near Las Vegas, is the only one noted.

5. **Recurvirostra americana.** AMERICAN AVOCET.—Summer resident; common. Breeds commonly up to 8,500 feet. Arrives by the first of April.

6. **Himantopus mexicanus.** BLACK-NECKED STILT.—Tolerably common. Often met with breeding in company with the Avocets. Arrived about the middle of April.

7. **Totanus solitarius.** SOLITARY SANDPIPER.—Fairly common. Breeds up to 8,000 feet.

8. **Actitis macularia.** SPOTTED SANDPIPER.—Common. Breeds throughout the country around small ponds. Arrives by May 1.

9. **Ægialitis vocifera.** KILLDEER.—Common. Breeds in May up to 11,000 feet. Arrives in March.

10. **Ægialitis montana.** MOUNTAIN PLOVER.—Not common. Breeds in the eastern part of the county up to 8,000 feet.

11. **Callipepla gambeli.** GAMBEL'S PARTRIDGE.—Abundant throughout the county. Resident.

12. **Dendragopus obscurus.** DUSKY GROUSE.—Common. A nest was taken with nine fresh eggs on May 16 on the top of Hermit Peak, 10,000 feet altitude.

13. **Meleagris gallopavo mexicana.** MEXICAN TURKEY.—Common in the mountains from 8,000 feet to timber line. Breeds early in April.

14. **Zenaidura macroura.** MOURNING DOVE.—Abundant up to 11,000 feet. Arrives in March; breeds from April until July.

15. **Cathartes aura.** TURKEY VULTURE.—Not common. Occurs up to 12,000 feet. Nests in April.

16. **Circus hudsonius.** MARSH HAWK.—Not uncommon in the lower portion of the eastern part of the county. Breeds up to 8,000 feet.

17. **Accipiter cooperi.** COOPER'S HAWK.—Common. Breeds up to 10,000 feet.

18. **Accipiter atricapillus striatulus.** WESTERN GOSHAWK.— One male shot January 9, and a female, doubtless the mate, in the same spot on March 7.

19. **Buteo borealis calurus.** WESTERN RED-TAIL.—Fairly common. Breeds up to timber line, early in April.

20. **Buteo swainsonii.** SWAINSON'S HAWK.—Common. Breeds up to 10,000 feet.

21. **Aquila chrysaëtos.** GOLDEN EAGLE.— Common; breeds up to timber line. Nesting begins early in March, usually in caves very difficult of access.

22. **Falco mexicanus.** PRAIRIE FALCON.— Fairly common in the eastern part of the county. Breeds up to 9,000 feet. Nests in May.

23. **Falco sparverius.** AMERICAN SPARROW HAWK.— Abundant. Breeds to 10,000 feet. Nests early in April.

24. **Asio wilsonianus.** AMERICAN LONG-EARED OWL.—Rare. Have met with but three or four pairs. Breeds up to 10,000 feet, during April.

25. **Syrnium occidentale.** SPOTTED OWL.— Rare. Have seen but two individuals — last December, about twenty miles from Las Vegas, in the pine district at an altitude of 9,500 feet.

26. **Megascops asio trichopsis.** MEXICAN SCREECH OWL.— Common. Breeds up to timber line, early in April.

27. **Speotyto cunicularia hypogæa.** BURROWING OWL.— Abundant locally. Breeds up to 8,000 feet during May and June.

28. **Ceryle alcyon.** BELTED KINGFISHER.— Fairly common. Breeds up to 9,000 feet. Feeds on young mountain trout.

29. **Dryobates villosus harrisii.** HARRIS'S WOODPECKER.— Abundant in the pines up to timber line. Breeds early in May.

30. **Sphyrapicus varius nuchalis.** RED-NAPED SAPSUCKER.— Common but not nearly as numerous as the next. Breeds from 9,000 to 12,000 feet.

31. **Sphyrapicus thyroideus.** WILLIAMSON'S SAPSUCKER.—Abundant. Breeds from 7,000 to 11,000. A nest taken May 30, was built in a live quaking aspen, on a mountain trail, 9,800 feet altitude.

32. **Melanerpes formicivorus bairdi.** CALIFORNIA WOODPECKER.— Common. Breeds from 8,000 to 10,000 feet.

33. **Colaptes cafer.** RED-SHAFTED FLICKER.—Abundant in the pines. Breeds up to timber line during May and June.

34. **Phalænoptilus nuttalli.** POOR-WILL.—Tolerably common. Breeds up to 9,000 feet. Arrives in May, breeding early in June.

35. **Chordeiles virginianus henryi.** WESTERN NIGHTHAWK.— Abundant. Breeds to 10,000 feet. Nests in June.

36. **Aëronautes melanoleucus.** WHITE-THROATED SWIFT.— Not common. Breeds in cliffs during May, from 8,000 feet to timber line.

37. **Trochilus alexandri.** BLACK-CHINNED HUMMINGBIRD.— Common up to 8,000 feet. Breeds late in June.

38. **Selasphorus platycercus.** BROAD-TAILED HUMMINGBIRD.— Common. Arrives in May, breeding most commonly at 9,000 feet.

39. **Tyrannus verticalis.** ARKANSAS KINGBIRD.— Common. Nests in June, up to 9,000 feet.

40. **Sayornis saya.** SAY'S PHŒBE. — Common. Arrives the last of March. Breeds early in May. One nest, found May 8, was built in a knot-hole of a hollow oak tree, 30 feet up.

41. **Empidonax difficilis.** WESTERN FLYCATCHER. — Rare. Breeds sparingly up to 10,000 feet.

42. **Empidonax wrightii.** WRIGHT'S FLYCATCHER. — Common. Breeds most commonly at 9,000 feet.

43. **Otocoris alpestris arenicola.** DESERT HORNED LARK.— Abundant. Breeds commonly at from 8,000 feet down.

44. **Pica pica hudsonica.** AMERICAN MAGPIE.— Common from 7,000 feet up. Breeds up to 12,000 feet.

45. **Cyanocitta stelleri macrolopha.** LONG-CRESTED JAY.— The most abundant bird in the county. Breeds up to 10,000 feet.

46. **Aphelocoma woodhousei.** WOODHOUSE'S JAY.— Not nearly as common as the last. Found only up to 8,000 feet, frequenting scrub-oak on hillsides. Breeds in May.

47. **Perisoreus canadensis capitalis.** ROCKY MOUNTAIN JAY.—Common. Found only from 9,000 feet up to timber line, where it breeds in May.

48. **Corvus corax sinuatus.** AMERICAN RAVEN.—Abundant from 8,000 feet up. Breeds in May, most commonly at 8,000 feet.

49. **Nucifraga columbiana.** CLARK'S NUTCRACKER.— Common from 9,000 feet up to timber line.

50. **Cyanocephalus cyanocephalus.** PIÑON JAY.— Common among piñon pines from 8,000 feet up. Nests in April.

51. **Molothrus ater.** COWBIRD.— Abundant. The birds most often imposed on are the Green-tailed Towhee and Stephens's Vireo.

52. **Agelaius phœniceus.** RED-WINGED BLACKBIRD.— Common. Breeds up to 9,000 feet.

53. **Sturnella magna neglecta.** WESTERN MEADOWLARK.— Abundant. Breeds up to 8,000 feet.

54. **Icterus bullocki.** BULLOCK'S ORIOLE.— Tolerably common. Breeds up to 10,000 feet.

55. **Scolecophagus cyanocephalus.** BREWER'S BLACKBIRD.— Fairly common, breeding from the plains to 8,000 feet.

56. **Carpodacus mexicanus frontalis.** HOUSE FINCH.— Abundant around Las Vegas and vicinity. Have not found it in the mountains to any great extent. In the city the House Finch takes the place of the the English Sparrow, which is conspicuously absent.

57. **Spinus psaltria.** ARKANSAS GOLDFINCH.—Not common. Found breeding up to about 10,000 feet.

58. **Poocætes gramineus confinis.** WESTERN VESPER SPARROW.— Common up to 8,000 feet.

59. **Chondestes grammacus strigatus.** WESTERN LARK SPARROW.— Abundant from the Plains to 8,000 feet.

60. **Spizella socialis arizonæ.** WESTERN CHIPPING SPARROW.— Abundant up to 9,000 feet, breeding most commonly at 7,000.

61. **Junco phæonotus dorsalis.** RED-BACKED JUNCO.— Abundant. Most common at 8,000 feet, breeding in clumps of scrub-oak on hillsides.

62. **Melospiza fasciata montana.** MOUNTAIN SONG SPARROW.— Common, breeding from 7,000 to 9,000 feet. Song differs considerably from that of the eastern species.

63. **Oreospiza chlorura.** GREEN-TAILED TOWHEE.— Common breeder from 7,000 to 9,000 feet. Nests in pastures and cleared land.

64. **Pipilo fuscus mesoleucus.** CAÑON TOWHEE.— Common. Breeds abundantly in scrub growths along the Gallinas Cañon, the last of April.

65. **Pipilo aberti.** ABERT'S TOWHEE.— Fairly common but not nearly as much so as the two preceding species. Common up to 9,000 feet.

66. **Zamelodia melanocephala.** BLACK-HEADED GROSBEAK.— Only fairly common. Breeds from 8,000 feet down.

67. **Petrochelidon lunifrons.** CLIFF SWALLOW.— Abundant. Nests in cliffs and under eaves of residences in the county. Occurs up to 8,000 feet.

68. **Tachycineta thalassina.** VIOLET-GREEN SWALLOW.— Abundant up to 8,000 feet and occasionally higher, but the bulk breeds at the above altitude. Hollow trees are sometimes resorted to for nesting.

69. **Vireo solitarius plumbeus.** PLUMBEOUS VIREO.— Common in the mountains up to 9,000 feet.

70. **Vireo huttoni stephensi.** STEPHENS'S VIREO.— Fairly common, breeding at 8,000 feet.

71. **Dendroica æstiva.** YELLOW WARBLER.— Fairly common in settled localities but not found in the mountains.

72. **Dendroica graciæ.** GRACE'S WARBLER.— Rare. Found a pair, evidently nesting, on June 12 at an altitude of 8,500 feet. Have seen very few and did not succeed in taking the nest.

73. **Cinclus mexicanus.** AMERICAN DIPPER.— Abundant. Most common from 8,000 feet up. Took several sets, from May 3 to May 16, each containing five fresh eggs. Two broods are raised, the second set of eggs being laid about July 1.

The Dipper is persecuted by the Mexicans who say it destroys young trout.

74. **Salpinctes obsoletus.** ROCK WREN.— Common. Breeds in crevices of boulders and stone walls, most commonly at from about 8,000 feet down.

75. **Catherpes mexicanus conspersus.** CAÑON WREN.— Fairly common, breeding commonly at 8,000 feet.

76. **Thryothorus bewickii leucogaster.** BAIRD'S WREN.— Common. Breeds in dead pine stubs and deserted Woodpecker and Nuthatch holes. The great bulk breed below 8,000 feet.

77. **Troglodytes aëdon aztecus.** WESTERN HOUSE WREN.— Abundant up to 10,000 feet. Raises two broods.

78. **Certhia familiaris montana.** ROCKY MOUNTAIN CREEPER.— Fairly common up to 10,000 feet, breeding between 7,000 and 9,000, occasionally up to timber line.

79. **Sitta carolinensis aculeata.** SLENDER-BILLED NUTHATCH.— Abundant. Breeds commonly in pines from 9,000 feet down to 7,000.

80. **Sitta pygmæa.** PIGMY NUTHATCH.— Abundant. The only really common bird during the winter months. They go up to 9,000 feet to breed and come much lower during the winter.

81. **Parus gambeli.** MOUNTAIN CHICKADEE.— Common. Breeds in May and June, from 9,000 feet up to timber line.

82. **Myadestes townsendii.** TOWNSEND'S SOLITAIRE. — Rare. Took a nest with four fresh eggs on June 7, at an altitude of nearly 10,000 feet.

83. **Merula migratoria propinqua.** WESTERN ROBIN.— Abundant. Arrives the latter part of February, breeding in April, May and June, according to altitude. Common up to 10,000 feet.

84. **Sialia mexicana bairdi.** CHESTNUT-BACKED BLUEBIRD.— Fairly common up to 12,000 feet. Breeds up to nearly 10,000 feet during May and June. Nests usually in deserted Woodpecker's holes or in hollow stumps.

85. **Sialia arctica.** MOUNTAIN BLUEBIRD.— Common. Arrives early in February, breeding in May up to 9,000 feet.

AVIFAUNA OF THE REVILLAGIGEDO ISLANDS.

BY A. W. ANTHONY.

DURING the past summer (1897) a little over a month was spent in exploring the Revillagigedo Islands, lying to the southwest of Cape St. Lucas, Lower California, and as very little is known of the birds of this region I have thought it worth while to put on record my notes taken while there.

Socorro Island, the largest of the group, lies about 240 miles southwest of Cape St. Lucas and about 285 miles to the westward of Maria Madre, the largest of the Tres Marias group, off San Blas.

Clarion Island lies approximately 200 miles to the westward of Socorro and somewhat further south, while San Benedicte is but 35 miles north of Socorro. Rocca Partida (Divided Rock) is

the fourth of the group and is but a high rock having the appearance of a ship under jury masts, and lies 65 miles northwest of Socorro.

The islands are all volcanic in origin and, in general, extremely rough and broken. On San Benedicte is found a heavy growth of coarse grass, wherever there is sufficient soil. But little other vegetation is found on the island. This grass, growing to the height of a man's head, made travel extremely disagreeable, as the barbed seeds penetrated our clothing by thousands and caused us much more trouble than the cactus thickets which we encountered on Clarion later. San Benedicte is a small island about three miles in length with an average width of half a mile.

Socorro Island was roughly estimated to contain 100 square miles, and to rise to a height of 4000 feet at its center, which is an extinct volcano. The greater part of the island is covered by a very dense growth of underbrush, the weather side (north and northwest exposures) being especially thickly covered, making travel, except in favored spots, well nigh impossible. Trees are abundant on the weather side of the island but on the south and east sides they are mostly confined to the cañons, and were smaller than on the northern slopes. They were nowhere seen over forty or fifty feet in height, though usually covering considerable area with their broad spreading branches. Three anchorages were made at Socorro, one on the north side and two on the south coast of the island.

Clarion Island has little in common with the others of the group, either in flora or fauna. It is only about five miles in greatest length by a mile in width, rising about 1500 feet in altitude. A few low trees or shrubs, the largest not over ten feet in height, are scattered along the main plateau, and in a few places reach the level ground that lies between the mesa and the coast on the south side. Nearly the entire flat between the mesa and the beach is covered with a dense growth of cactus (*Platopuntia*) over which has grown a mass of vines. Passage through this belt is only accomplished with diligent and constant use of the bush knife.

A short distance from the beach were found two small shallow ponds which contain water during the rainy season only, but as

the high tides evidently wash over the barriers and flood them with sea water it is doubtful if they are ever otherwise than brackish. At the time of our visit, in May, they had been dry for some months and no water was found anywhere on the island.

As might be expected, from the position and vegetation of Clarion, its birds are quite different from those of Socorro or Benedicte. The only land bird, in fact, that was common to any two islands was the Raven, which was abundant on Clarion and not uncommon on San Benedicte but, strange to say, was not seen on Socorro.

On the afternoon of April 27 we sailed from Cape St. Lucas for San Benedicte. At the Cape we left the last of the Larinæ, the Western Gull being fairly common and one or two Heermann's Gulls being seen.

Puffinus auricularis was not rare, and was seen at times all the way across to San Benedicte, becoming abundant on the morning of the 29th when we approached the island. *P. cuneatus* was also seen at the Cape but none were noted after leaving there until they became abundant near San Benedicte. Boobies and Man-o'-War Birds came off to meet us at daybreak while still some 35 miles from the island and escorted us to our anchorage.

The islands are treated separately for sake of comparison.

San Benedicte Island.

1. **Puffinus auricularis.** EARED SHEARWATER.— Small, scattered colonies were found on top of the island, the burrows being generally in the thick grass, and but few—not over a dozen— in a colony. At the time of our visit most of the burrows contained young that were, in many cases, nearly as large as the adults, but still covered with long plumbeous down, lighter (whitish) on the lower parts. Most of the adults were at sea during the daytime, but a few were found with the smallest young, those but a few days hatched. A single egg was found addled, and is now in the U. S. National Museum. It is pure white like the eggs of the other species of the genus that I have seen.

2. **Puffinus cuneatus.** WEDGE-TAILED SHEARWATER. — Seen about San Benedicte and Socorro Islands, but not common at the latter place. None were seen at Clarion or west of Rocca Partida. Both phases were seen, the sooty plumage outnumbering the light-bellied form about two to one. In a series of about 75 specimens all manner of intergrades can

be found, from those with pure white lower parts, including underwing coverts, to those having gray and sooty-brown plumage. In the upper surface there is very little variation. The species was not breeding to any extent at the time of our visit and but a single egg was secured, which is now in the U. S. National Museum. A more complete paper on the Shearwaters of our southwest coast is contemplated, when the present interesting species will be treated more in detail.

3. **Oceanodroma kaedingi.** KAEDING'S PETREL.—A number were seen at sea off the island as late as June 1. We found no evidence of the nesting of small Petrels on any of the islands of the group. It is possibly accounted for by the presence of vast numbers of large land-crabs that inhabit burrows all over the islands and would very likely destroy eggs and young of such species as *Oceanodroma*.

4. **Phaëthon æthereus.** YELLOW-BILLED TROPIC BIRD.— Common about the cliffs, and at sea, between the islands. They were often seen to enter holes in the ledges, and were usually in pairs, chasing each other about with loud cries that have given them the name of 'Bo-son Bird, the note being a good imitation of a boat-swain's whistle. Many holes were examined but no eggs found.

5. **Sula cyanops.** BLUE-FACED BOOBY.—Common. At the time of our arrival most of the birds were paired and were defending hollows in the sand where they contemplated laying. Only two or three sets were found of one egg each.

6. **Sula brewsteri.** BREWSTER'S BOOBY.— About as common as the preceding species, nesting at the same time. The nests of this species were all made of sticks and coarse grass in a hollow in the sand or rocks. Fresh eggs were found on May 17, in nests that were unfinished on the first of the month, when we first called at the island. It is interesting to compare in this connection the dates on which Mr. Goss found eggs of this species in the Gulf of California (Auk, Vol. V, 1888, 243).

7. **Sula websteri.** WEBSTER'S BOOBY.— By far the most abundant species on the island, nesting in the heavy growth of grass all over the island. Fresh eggs were taken the first of May, and on the 17th the same nests had second sets. A few young were found on the latter date. This species often took the liberty of perching on our heads and shoulders or lit on the rail of the skiff as we pulled ashore.

8. **Fregata aquila.** MAN-O'-WAR BIRD.— A considerable colony was found on the top of the island and several nests were also found at the base of the cliff near the beach. Young birds were fully fledged, many of them flying on May 1, and one or two fresh eggs were taken. On our second visit to the island, May 17, four or five sets were taken, evidently a second laying.

At a considerable distance from the colony a bird was found that was unable to fly, and thinking that it had been recently injured, and must necessarily starve, where food was not easily obtained by even the best of flyers, I killed the cripple and made an examination of its injuries.

One wing was withered and useless,—evidently the bird had never enjoyed its use, though it was fat and its stomach was well filled with flying fish. Those who know the feeding habits of *Fregata* need not be told that all their food is obtained on the wing, and a bird deprived of the use of its wings would speedily starve if not fed by its fellows. The precipitous sides of San Benedicte also made it impossible for a Man-o'-War Bird to gain the top of the island if deprived of its wings. So it was quite evident that the pensioner had never left the island, but had been dependent on the bounty of its fellows all of its life. From its excellent condition it was evident that even in that busy community of thousands some of them found time to feed the unfortunate.

9. **Heteractitis incanus.** WANDERING TATLER.—Several Tatlers were seen about the rocky shores of the island.

10. **Corvus corax sinuatus.** AMERICAN RAVEN.—Rather common on San Benedicte. During our two weeks stay at Socorro no Ravens were seen, which is a little strange since sheep are abundant and would furnish more food than can possibly be found on the barren rocks of San Benedicte. The fact of our not meeting with the species does not signify that it never occurs, however, for the islands are but 35 miles apart, and the distance could easily be traversed by a bird of such strong flight.

11. **Salpinctes obsoletus.** ROCK WREN.—Abundant. All of my specimens are in worn plumage and are unsatisfactory for comparison with mainland birds, but with the material at hand I see no reason for considering the island birds different from those of the peninsula.

Socorro Island.

On May 3 we left San Benedicte, anchoring the same afternoon on the southwest side of Socorro. The time until the 16th, was spent in exploring this island. No land birds were found that have not been recorded. All of the species are generally distributed, and with the exception of *Micropallas* and perhaps *Buteo* all of the species peculiar to the island could be easily taken in an hour and within a hundred yards of the beach. At the time of our visit all of the land birds except the Doves had long since nested and young, fully fledged, were taken as often as adults. From the appearance of the organs I concluded that the Ground Doves were just beginning to lay. With the exception of *Buteo socorroensis* land birds were remarkably tame.

1. **Larus occidentalis.** WESTERN GULL.—The fragments of a Gull were found on the beach at the southwest end of the island and I am

reasonably sure that they represented an immature bird of the present species.

2. **Sterna fuliginosa.** SOOTY TERN.— A large colony was found nesting on a rock a mile off the southwest point of the island. On May 12, we found most of the eggs hatched and many young were half-fledged. The eggs were single and laid on the bare rock. From the series of skins taken it would seem that 'var. *crissalis* Baird' would eventually have to be recognized. The material is insufficient, however, to warrant a definite conclusion.

3. **Anous stolidus ridgwayi.** RIDGWAY'S NODDY.—A large colony were nesting with the preceding species. Most of the eggs were fresh on May 12. They were laid on the bare rock with no attempt at nest building.

Terns were not seen about any of the other islands of the group.

4. **Puffinus cuneatus.**

5. **Puffinus auricularis.**—Both these Shearwaters were seen at sea about the island. No evidence of their nesting was noted, however.

6. **Oceanodroma kaedingi.** KAEDING'S PETREL.—Common at sea near the island. Apparently migrating.

7. **Phaëthon æthereus.** RED-BILLED TROPIC BIRD.— Common at sea and about all outlying rocks.

8. **Sula cyanops.**

9. **Sula brewsteri.**

10. **Sula websteri.**— Boobies were much less abundant about Socorro than at San Benedicte. Quite a colony were gathered about the cliffs on the southwest end of the island, but elsewhere they were only seen in small numbers, as they followed the small fish on which they fed.

11. **Fregata aquila.** MAN-O'-WAR BIRD.— Quite common with the Boobies, following them about the island and robbing them on all occasions.

12. **Ardea herodias.** GREAT BLUE HERON.—Not uncommon. Several were seen at each of our stations.

13. **Nycticorax violaceus.** YELLOW-CROWNED NIGHT HERON.—Quite common all over the island. Fully fledged young were shot May 14. They seemed to be feeding extensively on the land crabs, the shattered remains of which were often seen together with the tracks of this species.

14. **Heteractitis incanus.** WANDERING TATLER.— Occasionally seen all along the shore.

15. **Actitis macularia.** SPOTTED SANDPIPER.—A single bird was seen on the north side of the island May 14.

16. **Zenaidura graysoni.** GRAYSON'S DOVE.— This species did not seem to be at all common, but was perhaps more abundant in the higher parts of the island, which were very difficult of access.

17. **Columbigallina passerina socorroensis.** SOCORRO GROUND DOVE.— Rather common everywhere on the island.

18. **Buteo socorroensis.** SOCORRO RED-TAIL.—Not at all common and very wild.

19. **Micropallas graysoni.** GRAYSON'S ELF OWL.— A single specimen was shot on the south side of the island.

20. **Conurus holochlorus brevipes.** SHORT-FOOTED PAROQUET.—Quite common in several places. None were seen at the west end of the island, but on the north side, as well as near our anchorage on the south coast, we met with several flocks.

21. **Pipilo carmani.** CARMAN'S TOWHEE.—Very common all over the island. They were uniformly confiding and often half a dozen would congregate within a few feet of a person, silently inspecting him with an air of trustful curiosity quite foreign to other species of the genus with which I am familiar.

22. **Compsothlypis graysoni.** GRAYSON'S WARBLER.— Abundant all over the island but especially so in the trees on the north side.

23. **Mimodes graysoni.** GRAYSON'S MIMODES.— More common about the trees, but seen everywhere on the island. Most of our specimens had the feathers of the frontal region and about the bill glued together by some vegetable gum. One shot on May 14, contained in its stomach a large blue lizard over six inches in length. At the time of our visit the season of song was evidently passed, but occasionally a bird would favor us with a short song in the evening or early mŏrning. The notes were soft and full of rich melody, somewhat suggestive of the song of *Harporhynchus rufus* but of superior quality.

24. **Troglodytes insularis.** ISLAND WREN.— Very abundant everywhere, perhaps the most abundant species on the island.

Clarion Island.

1. **Diomedea nigripes.** BLACK-FOOTED ALBATROSS.—The only Albatross noted from south of Cape San Lazaro was seen a short distance from Clarion.

A Jaeger was seen at sea near the island May 29, but the species was not determined.

2. **Puffinus auricularis.** EARED SHEARWATER.—Several colonies were found on the island from which well grown young were taken May 27.

3. **Oceanodroma kaedingi.** KAEDING'S PETREL.—Seen at sea near the island.

4. **Phaëthon æthereus.** RED-BILLED TROPIC BIRD.—Common.

5. **Sula cyanops.** BLUE-FACED BOOBY.—Much more abundant than at the island further east. Nests were found from the beach to the top of the island.

Brewster's booby was not seen west of Rocca Partida, at which point one or two came off to inspect the schooner.

6. **Sula websteri.** WEBSTER'S BOOBY.—Very abundant. The nests of this species were always placed in branches of low shrubby trees on Clarion. Those nesting on San Benedicte, where no trees were found, were content

with a rock or rank bunch of grass, on top of which the nest was built of twigs and coarse grass.

7. **Fregata aquila.** MAN-O'-WAR BIRD.—Abundant.

8. **Ardea herodias.** GREAT BLUE HERON.—One or two seen.

9. **Heteractitis incanus.** WANDERING TATLER.—Not uncommon.

10. **Charadrius dominicus,** subsp.? A Golden Plover was shot on a coral reef on the south side of the island. The specimen is inaccessible at the present writing and I am uncertain to which race it should be assigned.

Accompanying this species was a large Plover that escaped me, and though seen on one or two subsequent occasions could not be secured.

11. **Arenaria interpres.** TURNSTONE.—Three Turnstones were seen in company with the Plovers above mentioned May 21.

12. **Zenaidura clarionensis.** CLARION ISLAND DOVE.—Very common. On May 19, a fully fledged young bird was taken, and on the 23d, a fresh egg was found in a hollow in the ground from which the parent fluttered upon our approach. As Doves were often seen flying along the cliffs and entering the holes in the lava it is very likely many were nesting in such places.

13. **Speotyto rostrata.** CLARION BURROWING OWL.—Abundant all over the island. At the time of our visit they were usually seen in pairs about the burrows which were often in colonies of a dozen, within a radius or fifty yards. Many burrows were opened and found to extend to a distance of from five to ten feet. They were very similar in all respects to the burrows of our ground Owls in western United States. From the burrows examined but a single set of 4 eggs was taken, the rest being empty. The eggs were not to be distinguished from those of *S. c. hypogæa*.

14. **Trochilidæ.**—A Hummingbird was reported by one of our party but as it was not secured, nor others seen during our stay, the species is unknown and it can only be regarded as a wanderer.

15. **Corvus corax sinuatus.** AMERICAN RAVEN.—Abundant.

16. **Chelidon erythrogaster.** BARN SWALLOW.—A number of Barn Swallows were seen on May 26, and one was shot; probably migrants.

17. **Troglodytes tanneri.** TANNER'S WREN.—Not uncommon. Seen all over the island. Many young taken between May 19 and 27 were scarcely to be distinguished from the adults. An old nest was found in a thick thorny bush. It was composed of material such as might have been selected by *T. aëdon* but the shape of the nest as well as its location might have been the design of a Song Sparrow.

NEW SPECIES, ETC., OF AMERICAN BIRDS.—II. FRINGILLIDÆ (continued).[1]

BY ROBERT RIDGWAY.

Curator of the Division of Birds, U. S. National Museum.

(By permission of the Secretary of the Smithsonian Institution.)

Pinicola enucleator alascensis. ALASKAN PINE GROSBEAK.

Similar to *P. e. canadensis* but decidedly larger, with smaller or shorter bill and paler coloration; both sexes with the gray parts distinctly lighter, more ashy. *Male*: Wing, 4.41–5.01 (4.61); tail, 3.34–4.04 (3.65); exposed culmen, 0.55–0.60 (0.57); depth of bill at base, 0.46–0.51 (0.48); width of mandible at base, 0.39–0.41 (0.40); tarsus, 0.87–0.92 (0.90); middle toe, 0.57–0.63 (0.60). *Female*: Wing, 4.49–4.74 (4.57); tail, 3.46–3.84 (3.68); exposed culmen, 0.57–0.61 (0.59); depth of bill at base, 0.46–0.50 (0.48); width of mandible at base, 0.40–0.42 (0.41); tarsus, 0.87–0.92 (0.89); middle toe, 0.58–0.60 (0.59).

Type, No. 86510, U. S. Nat. Mus., ♂ ad., Nushagak, Alaska, June 9, 1881; C. L. McKay.

Range: Northwestern North America, including wooded portions of Alaska except Kadiak and the southern coast district; south in winter to Montana (Bitterroot Valley), eastern British Columbia, etc.

Pinicola enucleator montana. ROCKY MOUNTAIN PINE GROSBEAK.

Similar to *P. e. californica* but decidedly larger and slightly darker, the adult male with the red of a darker, more carmine, hue; wing, 4.50–4.86 (4.71); tail, 3.48–4.00 (3.72); exposed culmen, 0.59–0.68 (0.63); depth of bill at base, 0.45–0.49 (0.47); width of mandible at base, 0.38–0.40 (0.39); tarsus, 0.87–0.95 (0.92); middle toe, 0.64–0.69 (0.66).[2]

Type: No. 159689, U. S. Nat. Mus., ♀ ad., Bear Creek, Gallatin Co., Montana, July 28, 1890; F. H. Knowlton.

Range: Rocky Mountains, breeding from Montana and Idaho to New Mexico.

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[1] Part I was published in the July Auk, pp. 223–230 under the title 'Descriptions of supposed New Genera, Species, and Subspecies of American Birds. I. Fringillidæ.'

[2] Eight specimens; four ♂, two ♀, and two of undetermined sex.

The remaining North American forms of Pine Grosbeak are the following:

(1) **Pinicola enucleator canadensis** (*Brehm*).
(2) **Pinicola enucleator flammula** (*Homeyer*), (= *P. e. kadiaka* Ridgway).
(3) **Pinicola enucleator californica** *Price*.

Astragalinus mexicanus jouyi. YUCATAN GOLDFINCH.

Similar to *A. m. croceus* (Jouy) but smaller; adult male with under wing-coverts mostly white or light yellow, with little if any admixture of black; wing (♂), 2.09–2.30 (2.25); tail, 1.32–1.49 (1.39); exposed culmen, 0.34–0.39 (0.35); depth of bill at base, 0.28; tarsus, 0.45–0.49 (0.48); middle toe, 0.36–0.40 (0.38).

Type: No. 106250, U. S. Nat. Mus., ♂ ad., Temax, Yucatan, Dec. 1884; Geo. F. Gaumer.

Range: Yucatan.

Calcarius lapponicus alascensis. ALASKAN LONGSPUR.

Similar to *C. lapponicus* but decidedly paler, especially in winter plumage; summer adults with ground-color of upper parts light buffy grayish brown, with little if any rusty tinge, even on wings, and the black streaks relatively narrower.

Type: No. 118904, U. S. Nat. Mus., ♂ ad., St. Paul's Island, Prybilov group, Alaska, June 5, 1890; Wm. Palmer.

Range: The whole of Alaska, including Prybilov and Aleutian Islands, Unalashka, and the Shumagins; east to Ft. Simpson; south in winter to Nevada, eastern Oregon, Colorado, western Kansas, etc.

Calcarius lapponicus coloratus. KAMTSCHATKAN LONGSPUR.

Much darker than true *C. lapponicus*, with black prevailing on the back in summer adults, the black of chest usually broadly confluent with that on sides of breast, and the upper parts strongly suffused with rusty (outer webs of tertials and greater wing-coverts bright rusty brown or light chestnut): adult female with a conspicuous collar of rufous-chestnut, pileum uniform black except along median line, and *picturæ* of anterior under parts much more strongly marked than in adult females of true *C. lapponicus*.

Type: No. 89167, U. S. Nat. Mus., ♂ ad., Copper Island, Kamtschatka, May 6, 1882; L. Stejneger.

Range: Commander Islands, Kamtschatka, in summer; Plover Bay, Siberia, and other parts of northeastern Asia in summer?

Junco montanus. MONTANA JUNCO.

Similar to *J. oreganus shufeldti* but much paler; adult male with the head, neck, and chest slate-color or slate-gray instead of black or slate-black; similar also to *J. mearnsi*, but wing and tail decidedly shorter and color of head, neck, and chest much darker.

Type: No. 133253, U. S. Nat. Mus., ♂ ad., Columbia Falls, Montana, May 7, 1894; R. S. Williams.

Range: Breeding from northwestern Montana (Tobacco Plains, Summit, St. Mary's Lake, Columbia Falls, etc.) and northern Idaho (Thompson's Pass) north to Alberta (Edmonton); in winter south to northern Mexico, Texas, etc., and east, irregularly or casually, to the Mississippi Valley and even to Maryland.

Brachyspiza capensis insularis. CURAÇAO SPARROW.

Similar to *B. capensis* but smaller, with larger and proportionally longer bill and clearer coloration; gray stripes of head lighter and purer gray, and white of under parts purer; wing, 2.52–2.65 (2.56); tail, 2.20–2.40 (2.31); exposed culmen, 0.49–0.50; depth of bill at base, 0.29–0.32 (0.30); tarsus, 0.80–0.83 (0.81); middle toe, 0.54–0.60 (0.58).

Type. No. 151724, U. S. Nat. Mus., ♂ ad., Curaçao, July 28, 1895.

Range: Island of Curaçao.

I have been able to make out the following geographical forms of this widely distributed species:—

(1) **Brachyspiza capensis** (*Müller*). (Venezuela to Paraguay and Argentina.)
(2) **Brachyspiza capensis insularis** *Ridgway*. (Curaçao.)
(3) **Brachyspiza capensis peruviana** (*Lesson*). (Peru to southern Mexico.)
(4) **Brachyspiza capensis chilensis** (*Meyen*). (Chili.)
(5) **Brachyspiza capensis canicapilla** (*Gould*). (Southern Patagonia.)

Pyrgita peruviana Lesson, Rev. Zool. 1839, 45, is apparently the earliest name for the form which Dr. Allen separated under the name *Zonotrichia capensis costaricensis* (Bull. Am. Mus. Nat. Hist. III, 1891, 375). I have carefully compared specimens from the two type localities (Lima, Peru, and San José, Costa Rica), and have been unable to discover any material difference. *Frin-*

gilla mortonii Audubon (Orn. Biog. V, 1839, 312; Birds Am. III, 1841, 151, pl. 190) is also most probably the same form.

Guiraca cærulea lazula (*Lesson*). WESTERN BLUE GROSBEAK.

The name *Pitylus lazulus* Lesson (Rev. Zool. V, 1842, 174) has usually been placed, with more or less doubt, in the synonymy of *Cyanocompsa parellina*. The type locality is San Carlos, Nicaragua (Pacific side). *C. parellina* does not range farther south than southern Mexico, which fact alone should render this reference of Lesson's bird most improbable; but Lesson's description removes at once all doubt in the matter, since it shows that the Western Blue Grosbeak is clearly indicated. The locality is also within its ascertained range. *Guiraca cærulea eurhyncha* (Coues), therefore becomes a synonym of *G. c. lazula* (Lesson).

Euetheia coryi. CORY'S GRASSQUIT.

Similar to *E. lepida* but smaller, upper parts decidedly more yellowish olive, lateral under parts less grayish olive, and median under parts more yellowish.

Type: No. 9107, Field Columbian Museum, ♂ ad., Cayman Brac, March 31, 1888: C. J. Maynard.

Range: Island of Cayman Brac, Caribbean Sea.

Euetheia bryanti. BRYANT'S GRASSQUIT.

Similar to *E. lepida* but decidedly smaller and color much brighter olive-green above and the under parts more yellowish, the abdomen often light yellow.

Type: No. 75351, U. S. Nat. Mus., Porto Rico; Dr. H. Bryant.

Range: Island of Porto Rico, Greater Antilles.

Pyhrrulagra affinis (*Baird*).[1] HAITIEN PYRRHULAGRA.

Similar to *P. ruficollis*[2] in coloration, but decidedly smaller. Adult

[1] *Loxigilla affinis* Baird, MS.

[2] [*Tanagra*] *ruficollis* Gmelin, Syst. Nat. I, pt. ii, 1788, 894 (Jamaica: based on *Rufous-throated Tanager*, Latham, Synopsis Birds, II, pt. i, 241). Both the Haitien and Jamaican *Pyrrhulagræ* are sufficiently distinct from the Bahaman form (*P. violacea*), the females and immature males being quite different in color.

male: Wing, 2.86–3.05 (2.97); tail, 2.45–2.80 (2.55; exposed culmen, 0.56–0.60 (0.58); depth of bill at base, 0.45–0.52 (0.48); tarsus, 0.80–0.87 (0.83) middle toe, 0.58–0.62 (0.60). *Adult female*: Wing, 2.61–2.76 (2.69); tail; 2.32–2.38 (2.35); exposed culmen, 0.49–0.50; depth of bill at base, 0.41 tarsus, 0.77–0.80 (0.79); middle toe, 0.52–0.54 (0.53).

Type: No. 42465, U. S. Nat. Mus, "♀" (i. e. ♂ ad.?), Port au Prince, Haiti, May 8, 1865; A. C. Younglove.

Range: Island of Haiti, Greater Antilles.

Pyrrhulagra dominicana. DOMINICAN PYRRHULAGRA.

Similar to *P. noctis* (of Martinique), but adult male with under tail coverts usually rufous or with rufous predominating; in the last respect like *P. grenadensis*, but duller black and size greater, the wing averaging 2.88 instead of 2.69, tarsus 0.78 instead of 0.75.

Type; No. 77820, U. S. Nat. Mus., ♂ ad., Dominica; F. A. Ober.

Range.—Islands of Dominica, Marie Galante, Desiradé, Grand Terre, and Guadeloupe, Lesser Antilles.

Pyrrhulagra crissalis. ST. VINCENT PYRRHULAGRA.

Similar to *P. grenadensis* but rufous throat-patch extending farther backward (involving upper part of chest).

Type: No. 74083, U. S. Nat. Mus., ♂ ad., Cumberland Valley, St. Vincent, Oct. 22; F. A. Ober.

Range: Island of St. Vincent, Lesser Antilles.

Pyrrhulagra coryi. CORY'S PYRRHULAGRA.

Similar to *P. ridgwayi* Cory, but decidedly darker; adult male dull black above and on anterior under parts of body, becoming dull slaty on abdomen and flanks; under tail-coverts usually wholly chestnut-rufous, sometimes intermixed with dusky slate.

Type: No. 80965, U. S. Nat. Mus., ♂ ad., St. Eustatius; F. A. Ober.

Range: Islands of St. Eustatius, St. Christopher, Saba (?) and Anguilla (?), Lesser Antilles.

Passerina vs. Cyanospiza.

In the 'Bulletin' of the Nuttall Ornithological Club, Vol. V, 1880, p. 96, Dr. Coues formally sets up the name *Passerina* Vieillot, in place of *Cyanospiza* Baird, and gives the following reasons for doing so: "The genus *Cyanospiza* Bd., 1858, is given in Gray's Hand-list, II, p. 97, as synonymous with *Passerina* Vieill., 1816. This is correct. The type of *Passerina* Vieill. as given in the

Analyse, 1816, p. 30, is "Le Ministre' of Buffon," etc. This conclusion has unfortunately been adopted by the A. O. U. Committee, in whose Check-List the type of *Passerina* Vieillot, is said to be "by elimination," *Tanagra cyanea* Linn. That this view of the case is quite wrong, however, I think may easily be shown. After the diagnosis of his genus *Passerina* in the 'Analyse,' Vieillot mentions three species, in the following order: "Ministre [= *Tanagra cyanea* Linn.]. — Ortolan de riz [= *Fringilla oryzivora* Linn.]. — de neige, Buff." [= *Emberiza nivalis* Linn.]. The first of these to be made the type of a new genus was *Fringilla oryzivora* (*Dolichonyx* Swains., 1827); the next, *Tanagra cyanea* (*Cyanospiza* Baird, 1858), *Emberiza nivalis* not having been made the type of a new genus until 1882, when Dr. Stejneger (Proc. U. S. Nat. Mus. V, p. 33), after demonstrating that the type of *Plectrophanes* Meyer, 1815, is *Fringilla lapponica* Linn. and not *Emberiza nivalis*, proposes for the latter the generic name *Plectrophenax*.

The type of *Passerina* Vieill., therefore, is, "by elimination," *Emberiza nivalis* and not *Tanagra cyanea*. If this view of the case is correct, we shall have to restore the unusually appropriate name *Cyanospiza* for the Indigo Bird and its congeners, and use *Passerina* for the Snowflakes, the recognized forms of the two genera being as follows:

CYANOSPIZA *Baird.*

1. **Cyanospiza cyanea** (*Linn.*) *Baird.*
2. **Cyanospiza amœna** (*Say*) *Baird.*
3. **Cyanospiza ciris** (*Linn.*) *Baird.*
4. **Cyanospiza leclancheri** (*Lafr.*) *Dugès.*
5. **Cyanospiza versicolor** (*Bonap.*) *Baird.*
6. **Cyanospiza versicolor pulchra** (*Ridgw.*) *Ridgw.*
7. **Cyanospiza rositæ** *Lawr.*

PASSERINA *Vieillot.*

1. **Passerina nivalis** (*Linn.*) *Vieill.*[1]
2. **Passerina nivalis townsendi** (*Ridgw.*) *Ridgw.*
3. **Passerina hyperborea** (*Ridgw.*) *Ridgw.*

[1] Faune Franç. 1820, 86.

DESCRIPTION OF A NEW SPECIES OF HUMMINGBIRD FROM ARIZONA.

BY ROBERT RIDGWAY.

(By permission of the Secretary of the Smithsonian Institution.)

Atthis morcomi, sp. nov. MORCOM'S HUMMINGBIRD.

Adult female (Type, No. 153886, U. S. Nat. Mus., Huachuca Mts., Arizona, July 2, 1896; H. G. Rising): Above bright bronzy green, duller and inclining to grayish brown on top of head, especially forehead; remiges plain purplish dusky; middle pair of rectrices mainly bronzy green, but much tinged with rufous on basal half, the outer web rather broadly edged with the same nearly to tip; rest of tail-feathers clear cinnamon-rufous for basal half, this succeeded by a narrow bar of metallic green, then uniform black for about .20 of an inch, the tip white; this white tip broadest (about .20 wide) an outermost feather, obsolete on the fourth. Under parts white, except sides and flanks, which are light cinnamon-rufous, the under tail-coverts being very faintly tinged with the same; whole throat marked with small tear-shaped streaks of dull bronze-green or olive-bronze, larger and more spot-like posteriorly. Length (before skinning), 2.95; wing, 1.40; tail, 0.77; exposed culmen, 0.50.

Another adult female collected at same time and place differs in entire absence of streaks or spots on throat (though the sides of the neck are somewhat spotted) and in having the under tail-coverts more distinctly tinged with pale cinnamon-rufous. Length (before skinning), 3.02; wing, 1.50; tail, 0.80; exposed culmen, 0.50.

The adult male of this species is unfortunately unknown. The adult female differs from that of *A. heloisa* in being pure bronze-green above instead of almost coppery bronze inclining to greenish only on upper tail-coverts and middle tail-feathers; in having the cinnamon-rufous on basal portion of the tail far more extensive, there being more on the middle retrices in *A. heloisa*, while on the others it occupies very much less than the basal half, and is entirely hidden by the coverts; the sides and flanks are less deeply, and apparently less extensively, cinnamon-rufous, and the under tail-coverts are white or but very faintly buffy, instead of being deep cinnamon-buff.

This new species is dedicated to Mr. G. Frean Morcom, of Los Angeles, California, to whom I am indebted for the privilege of describing it. The type was presented to the National Museum by Mr. W. B. Judson.

DESCRIPTION OF A NEW SPECIES OF *GYMNOSTINOPS*.[1]

BY CHARLES W. RICHMOND.

AMONG the birds obtained by Lieut. Michler's expedition across the Isthmus of Panama, via the Atrato River, are two specimens of *Gymnostinops*, labeled in Cassin's handwriting "*Ostinops guatimozinus*." One is an adult female of the true *G. guatimozinus*, the other is an adult male of a species more nearly related to *G. montezumæ* but quite distinct, and hitherto unnamed. The male was apparently the only specimen before Cassin when he reported on the Michler collection, as his remarks here quoted indicate: "One specimen, labeled as a male, in the collection of the expedition is distinct from any species in Acad. coll. or that we find described, except as above [*Ostinops guatimozinus* Bonap.]. It is nearly allied to *O. montezumæ* of Mexico and Central America, and *O. bifasciatus* of Northern Brazil, both of which are in the Acad. coll. and are distinct from each other.

"The present bird differs from both of the above species in being larger, darker colored, and having a lengthened almost filiform crest. The bill also is disproportionately longer and wider at base, with a rounded termination in front. It is not without scruples that I apply the name above to this bird; the description by the Prince-Bonaparte, as cited, not being sufficient or the recognition of any species nearly related to another."[2] The collector's notes are then given as follows:

[1] By permission of the Assistant Secretary, Smithsonian Institution.

[2] Proc. Acad. Nat. Sci. Phil., 1860, 138, 139.

"At Camp Albert, on the Truando, before reaching the Cordilleras, one specimen only seen, which was shot; it was very shy and seemed to be a stranger."[1]

In a later paper Cassin refers to both skins, and writes of the male as the "younger" specimen, differing from the adult [the female] in having the "sides purplish brown" but otherwise like the adult. (Proc. Acad. Nat. Sci. Phil., 1867, 71.)

The Truando bird of Cassin's first paper, which is the basis of the extension of range of *G. guatimozinus* to the Isthmus of Panama, is a new species, in some respects intermediate between that species and *G. montezumæ*, but otherwise quite different. The female of Cassin's second paper is typical *guatimozinus*, and was collected at Turbo, a small village on the Gulf of Uraba, on the Atlantic side of the Isthmus.

The new bird may be briefly described as follows:

Gymnostinops cassini, new species. CASSIN'S OROPENDOLA.

Type: U. S. Nat. Mus., No. 17847, ♂ adult, "Camp Albert," Truando River, Colombia, Dr. A. Schott.[2] Original No. 162.

Similar to *G. montezumæ*, but chestnut markings darker; crest feathers very much longer and almost filiform; base of culmen much wider. Under parts and thighs dull black; sides of body dark chestnut. Bill black, tip whitish (in dried specimen) for one inch; a line bordering base of culmen and extending half way to nostrils also whitish. The median pair of tail-feathers fall short of the outer ones by about three quarters of an inch, against two inches in *G. montezumæ*.

Wing, 10.60 inches; tail, 7.85; culmen, 3.35; depth of bill at base, 1.30; width of culmen at base, .82 (.55–.60 in *G. montezumæ*); tarsus, 2.40; length of crest a trifle over three inches.

In size, length of crest, extent of light color on bill, and width of culmen at base, *G. cassini* stands first. It is intermediate in general color of plumage, and of thighs, and in the extension of the yellow tail-feathers beyond the black ones.

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[1] Ibid., 139.

[2] Cassin says the collection was made by Wm. S. and J. C. Wood of Philadelphia, but in the museum register and on the labels of specimens the whole series is credited to Dr. A. Schott.

BREEDING HABITS OF THE SOLITARY SANDPIPER (*TOTANUS SOLITARIUS*).

BY C. K. CLARKE, M. D.

EARLY this spring I became aware of the fact that at least one pair of Sandpipers, different from the Spotted Sandpipers, which breed commonly on Simcoe Island, had taken up their residence there.

Although the habits of the Bartramian Sandpiper formed the chief subject of investigation, time after time I was attracted by a pair of small Sandpipers, invariably to be found perched on the fence posts in a certain locality. Just what the birds were could not at first be satisfactorily determined, and for a time I was inclined to think that they might prove to be Buff-breasted Sandpipers. As it was evident that they were likely to breed, I returned time and again to the island, generally carrying a gun, so that the birds might be secured if the nest was found. At last, when accompanied by the Rev. C. J. Young, the birds flushed in the usual locality, and a depression in the ground, nicely rounded, was found and marked. I returned in a week's time fully expecting to take a set of eggs, but the birds had evidently deserted the place, and were no where to be seen. It was a disappointment, as by this time it had become tolerably certain that the visitors were Solitary Sandpipers.

On June 10, Mr. Edwin Beaupre and I went for a last look at the birds breeding on the island, but had given up all hope of finding the strange Sandpiper. We flushed a Bartramian Sandpiper, and were examining the nest containing three fresh eggs, when the little stranger rose within four or five feet of us, and there, in plain view not two yards from the Bartramian's nest, were the eggs. The Sandpiper flew a short distance without uttering a sound, and sat on a fence post watching us. Unfortunately the gun had been left at home, but we had two pairs of good marine glasses and were able to examine the bird at close range as it perched on the fence. There was no longer

any doubt about its identity, and it was easily classified as the Solitary Sandpiper. We watched it for some time, as it flew about, but its silence was remarkable, and in marked contrast to the noisy demonstrations of the Bratramian Sandpiper which had been disturbed. A glance at the eggs showed that we had a rarity. In the first place the number, five, in a Sandpiper's nest was a new experience, and the peculiar coloring and markings were interesting. The eggs when collected had the peculiar dark reddish ground color so frequently noticed in fresh specimens of the Bartramian Sandpiper, but like them soon lost this characteristic tint. Faint purple shell markings gave a pleasing contrast, but the grotesque brown figurings, somewhat similar in shape to those found on the eggs of the Purple Grackle, remain as the striking feature. These grotesque markings exist on three of the specimens. A comparison made with a large series of the eggs of the Spotted Sandpiper reveals the following differences: Solitary Sandpiper's differ from them in shape, size, ground color and markings.

In the eggs of the Spotted Sandpiper the markings are generally much thicker at the upper ends; in the eggs of the Solitary Sandpiper the reverse is the case. The variations in shape in the set of the Solitary Sandpiper found, are somewhat remarkable as the measurements show. Incubation was well advanced, thus showing that the Bartramian had not been the first to commence nest building. The location of the nest was in a hilly field probably seventy-five yards from Lake Ontario. The measurements of the eggs are as follows: — 1.39×.95, inches, 1.32×.94, 1.30×.97, 1.30×.94, 1.29×.95.

GENERAL NOTES.

Antrostomus carolinensis Devouring other Birds. — Dr. W. L. Abbott recently presented a specimen of Chuck-will's-widow to the Philadelphia Academy, which he secured on shipboard off Sagua, Cuba, Sept. 4, 1898, and which contained in its stomach a partially digested Yellow Warbler (*Dendroica æstiva*). Dr. Abbott stated that quite a number of small Warblers had been flying about the ship for several days and probably the Antrostomus was hard pressed and devoured one of them in lieu of his usual food. Such records seem to be uncommon and worthy of note.— WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

Tyrannus magnirostris d'Orb. Renamed. — The name *Tyrannus magnirostris*, given by d'Orbigny to the Cuban Kingbird in 1839, is antedated by Swainson (Fauna Boreali-Americana, 1831, 484), who, for some reason best known to himself, applied this name to *Megarhynchus pitangua* (Linn.), a common bird of the mainland of tropical America. A new name thus being necessary for d'Orbigny's species, it may be called *Tyrannus cubensis*. — CHARLES W. RICHMOND, *U. S. National Museum, Washington, D. C.*

Nest Building under Difficulties. — While visiting a farmer living in Bucks County, Pa., I was shown a nest of a Field Sparrow (*Spizella pusilla*), which he accidently cut down while cradling rye. The nest, which contained fresh eggs, was built about two feet above the ground and was supported between the standing stalks of the rye. The bird evidently experienced some difficulty in starting the structure, as the material kept sliding down loosely on the smooth stalks as fast as it was built. The bird, however, was determined to build it at the original height, which was finally accomplished, and when completed was about one foot deep, having a loose spiral appearance. This was no doubt the result of poor judgment, which is often seen among juvenile birds. — J. HARRIS REED, *Beverly, N. J.*

Hemithraupis: — A Correction. — In my paper describing new genera, etc., of Fringillidæ and Tanagridæ in the July Auk, I inadvertently gave the generic name *Hemithraupis* to a genus of Tanagers, with *Aglaia cyanocephala* Lafr. & D'Orb. as type, forgetting at the time that the same name had been given by Cabanis in 1851 to the group having *Hylophilus ruficeps* Max. as type (*cf.* Mus. Hein. I, p. 21); a strange oversight, since I have of course been long aware of the fact and have the genus elaborate under that name in my manuscript. The genus which I have separated as *Hemithraupis* with *Aglaia cyanocephala* as type requir-

ing a new name, I therefore propose **Sporathraupis** (σπορά = *spurius*, θραυπίσ, *nom. prop.*)— ROBERT RIDGWAY, *U. S. National Museum, Washington, D. C.*

Kirtland's Warbler (*Dendroica kirtlandi*) **in Florida.** — I saw a Kirtland's Warbler on April 19, 1897, at West Jupiter, Florida, and shot another at the same place on April 27, — the only specimen actually killed. Of course I may have been mistaken about the one seen April 19, but I myself have no doubt of its correct identification.— CHARLES B. CORY, *Great Island, Hyannis, Mass.*

Dendroica kirtlandii in Pennsylvania: — A Correction. — In my 'Birds of Eastern Pennsylvania and New Jersey' published some years since by the Delaware Valley Ornithological Club, I omitted without comment *Dendroica kirtlandii*, which had been included in Dr. Warren's report on the 'Birds of Pennsylvania,' on the strength of information furnished him by Prof. H. Justin Roddy. My action was based upon a letter from Prof. Roddy in which he states that, owing to an unfortunate blunder, the notes given to Dr. Warren under head of *Dendroica kirtlandii* were intended for another species and that he had never seen or heard of Kirtland's Warbler in the State. Inasmuch as Mr. A. W. Butler has quoted Prof. Roddy's records of this bird in his recent 'Birds of Indiana' and based his remarks on the probable breeding range of the species partly upon them, it seems high time that the error should be corrected, as ought to have been done in my previous publication. — WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

The Pine Warbler (*Dendroica vigorsii*) **a Breeder in Ohio.** — On August 5 of this year, while out on a short collecting stroll, one of my companions, Prof. W. A. Chesroron of the Waverly High School, shot a Warbler out of a number of others and kindly presented me with the specimen. I identfied it as a Pine Warbler and Mr. H. C. Oberholser was so kind as to verify this determination, the bird being a young male still partially in first plumage, so that, as Mr. Oberholser said, "this fact makes it almost certain that it was reared in the neighborhood, for at that age it could not, or at least probably would not, have traveled far." Dr. Wheaton in his 'Birds of Ohio,' states that it is "a not common spring and fall migrant, but that there is no instance of its breeding in the State," and Mr. Oberholser adds that my record "appears to be the first instance of the breeding of this species in Ohio." My bird was shot in tall timber near the Waverly canal. No pine trees are to be found in this vicinity. The entire episode seems to be a circumstance of sufficient interest to be worth recording. — REV. W. F. HENNINGER, *Waverly, Ohio.*

The Yellow-breasted Chat in Oneida County, N. Y. — On June 6, 1898, in a pasture, situated on high ground, well filled with second growth

shrubs and bushes, and with a very small spring brook flowing through the centre, I took a nest and four eggs of the Yellow-breasted Chat (*Icteria virens*). Only one pair of birds was found, and I am assured by Mr. Egbert Bagg, of Utica, N. Y., who was the compiler of the list of Oneida County birds, that this is the first known record of the occurrence ot the Yellow-breasted Chat in Oneida County.

A Whip-poor-will (*Antrostomus vociferus*) made his first stop here this season, although they are resident in localities twenty miles to the east or west. — W. J. B. WILLIAMS, *Holland Patent, N. Y.*

Curious Nesting of American Redstart. — On June 5, 1898, while hunting through a great timber swamp in Yates Co., N. Y., in company with Mr. C. F. Stone, I saw a Vireo's nest and the bird on it appeared to be new to me, but as I drew near it left the nest, dropped to the ground and fluttered away, when I recognized it as a female American Redstart (*Setophaga ruticilla*). Mr. Stone then came up and we examined the nest and found it to be an old Red-eyed Vireo's (*Vireo olivaceus*), newly lined by the Redstart with the fine red bark fiber that it usually uses to line its nests with in this locality, and it contained three fresh eggs of the Redstart. — VERDI BURTCH, *Penn Yan, N. Y.*

Nesting of the Robin. — In 'The Auk' for July, 1898 (p. 274) I read Mr. S. M. McCormick's very interesting article on the 'Nesting Habits of the Robin,' and having found a rather unusual place for a nest I would like to report it. In Woodbourne, N. Y., Dr. Munson has a large dwelling with a piazza in front over which a honeysuckle has been trained, and in this vine, about eight feet up, on a branch three quarters of an inch in circumference, with six little runners, the nest was built, it being made doubly secure by the winding of grasses around the branches, covering the bottom entirely. But what struck me as remarkable was the almost perpendicular hanging of the nest, looking very much as a China saucer does on a bracket. The bottom partially rested against some wire that the vine ran on, but it was not fastened to it. Two broods were raised in it without any attempt at house-cleaning. Possibly they found there was no time for such a luxury. I was very sorry not to see the birds in it, but I did not get to the place in time. — A. A. CROLIUS, *New York City.*

A Note on the Wood Thrush. — It seems worthy of mention, that on examining a large series of Wood Thrushes (*Turdus mustelinus*) taken throughout their range, the majority of specimens from west of the Appalachian Highlands and the St. Lawrence Valley average much smaller in measurements (bill, culmen .56 in. and depth .18, tarsus 1.08, and wing 4.22), than those from east of the Highlands (bill, culmen, .63+ and depth .21+, tarsus 1.15, and wing 4.31). Typical western

birds having been secured not uncommonly in the East, and vice versa, does not allow, however, the establishment of a western subspecies.— REGINALD HEBER HOWE, JR., *Longwood, Mass.*

Notes from Chateaugay Lake, New York.— During a collecting trip to Chateaugay Lake, Northern Adirondacks, last autumn (Aug. 24 to Sept. 7, 1897) I secured with Mr. G. C. Shattuck, a pair of American Three-toed Woodpeckers (*Picoides americanus*), a species not very uncommon about the lake. One specimen of the Wood Thrush (*Turdus mustelinus*) was also taken. Mr. Shattuck had in previous years taken specimens. This bird was generally found in company with Hermits and Swainson's Thrushes behind the camp where the waste food was thrown. Its occurrence there seems to show that it is found along the western as well as eastern shores of Lake Champlain. Early during my stay I was pretty sure I caught a glimpse of a Philadelphia Vireo (*Vireo philadelphicus*), and after I left Mr. Shattuck secured a specimen.— REGINALD HEBER HOWE, JR., *Longwood, Mass.*

Ectopistes migratorius, Mimus polyglottos, and Sturnella magna neglecta in Bristol Co., Mass.— In company with a friend and my brother on August 23, 1889, I was shooting on the mud flats around the reservoir at Norton, Mass. In making a detour of a small inlet, I flushed a Passenger Pigeon from among the low blueberry and bayberry bushes among which I was tramping. The bird alighted in a small white birch near at hand, seeming very unsuspicious, and I shot it. On dissection it proved to be a ♀ young-of-year and was in very good plumage. This is the last record I have of this species. The bird is now mounted and in my collection.

April 30, 1896, a Mockingbird appeared and established himself among the shrubbery in a neighbor's grounds. This was no escaped cage-bird, as his perfect, unfrayed feathers evinced. He was in constant song during his stay, frequently singing half the night when the moon was bright. After enjoying a week of Mockingbird music I was disappointed to find the singer gone, owing to a late driving snow storm, and he did not again appear.

On April 9, of this year (1898), a Western Meadowlark made a visit of a few days in the fields not far from my home. The bird was first seen by an acquaintance, who asked "what bird is it that resembles a Meadowlark in form and color, larger and darker possibly than the Meadowlark but with a wonderfully beautiful song." This bird remained in the same locality for four days, showing no signs of fear and offering an excellent opportunity for one to observe its habits. I was unable to shoot the bird, but identity is beyond all doubt, the song alone being sufficient to remove all queries on that score.— BRADFORD ALEXANDER SCUDDER, *Taunton, Mass.*

RECENT LITERATURE.

Davie's Nests and Eggs of North American Birds.[1]— The fifth edition of this useful book contains seventy-nine pages more than the preceding edition,[2] the increase in size being due in part to the addition of new matter and in part to the introduction of many illustrations, some of which appear to have been drawn especially for this work but most of which are borrowed from other publications. They are very unequal in character and some of them might have been omitted to advantage, the attempt to print half-tones on uncalendared paper being particularly unsuccessful.

The text is greatly improved, much that was wanting in the preceding editions being supplied in the present one. In some instances, however, Mr. Davie does not appear to have availed himself of the most recent information concerning the species treated. Thus his remarks in regard to the Labrador Duck, Cory's Bittern, the Heath Hen, Ipswich Sparrow, Philadelphia Vireo, Bachman's Warbler, and Olive Warbler by no means represent our knowledge concerning these species. *Junco hyemalis connectens* is wrongly given as *Junco hyemalis shufeldti* and *Platypsaris alaiæ* [*sic*] is included presumably as a North American bird but on just what authority is not stated.

These errors are obviously not of a serious nature and they detract but little from a book whose value is measured by its marked success.— F. M. C.

Bird-Nesting with a Camera.[3]— Since our last notice of this fine work[4] the parts have continued to appear with regularity and we now have before us Part XII, completing the third volume. Many of the plates are fully equal to those of volume I, of which we could not speak too highly, while others have lost in clearness of definition, apparently through too great enlargement, it being presumably the author's desire to make all the plates in the book of the same size without regard to the

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[1] Nests and Eggs | of | North American Birds | By | Oliver Davie | Author of "Methods in the Art of Taxidermy," etc. | — | The Fifth Edition | — | Revised, Augmented and Illustrated | — | Part II. Ornithological and Oölogical Collecting | (The preparation of skins, nests and eggs for the cabinet.) | — | Columbus: | The Landon Press | 1898.— 8vo. pp. [i–xi] 1–509, 1–18, i–xxi, numerous text cuts.

[2] Reviewed in 'The Auk', XI, 1889, 328.

[3] Among British Birds in their Nesting Haunts. By Oswin A. J. Lee. Illustrated by the camera.

[4] Auk XIV, 1897, p. 334: see also *ibid.*, pp. 106, 247.

size of the negative from which they are reproduced. The illustrations, therefore, in several instances (*e. g.*, the Gannets on the Bass Rock and Puffins on Lunga) fail to do justice to the exceedingly interesting subjects they represent. However, the difficulties to be encountered in photographic work of this nature are so innumerable that perfection is out of the question, and far from criticising Mr. Lee for a failure to always reach his own high standard, we should remember that his skill and energy has given us the best work of its kind which has thus far appeared. — F. M. C.

Butler's 'Birds of Indiana.'[1] — In 1890 Mr. Butler published an excellent, extensively annotated 'Catalogue of the Birds of Indiana' (See Auk, VIII, 1891, pp. 383, 384), embracing 301 species, with a supplementary 'Hypothical List' of 79 species. The present 'Birds of Indiana' is a much more comprehensive work, the former enumeration being not only brought down to date, and expanded by the introduction of much new matter relating to the habits and nature of the occurrence of the species in Indiana, but by technichal descriptions and keys to the genera and species, and by many additional illustrations. It is thus well adapted to furnish the information demanded by the present greatly increased interest in birds, in the State of Indiana as elsewhere, in reference to their varied economic and other relations. In the present treatise of nearly 650 octavo pages, the number of species recorded as positively known to occur in the State is 321, with a supplemental list of 81, given as of more or less probable occurrence, from their having been taken in adjoining States.

The work opens with an 'Introduction' (pp. 515–531), treating of the position and physiographic features of the State, and of the changes that have taken place in its bird life and their causes, and a comprehensive bibliography (pp. 532–548). While this report is based largely on the notes of the author, "made principally in southeastern Indiana within the past twenty-one years," all other available material bearing on the subject is apparently utilized, for which due acknowledgment is formally made. Most of the 'keys,' for example, are (by permission) from Mr. Ridgway's 'Manual of North American Birds,' and the technical descriptions are in many instances transferred from the same or similar standard sources. Many of the cuts are from Dr. Coues's 'Key to North American Birds,' while those of the publications of the U. S. Department of Agriculture, through the kindness of Dr. Merriam, have been extensively drawn upon, particularly those relating to the Hawks and Owls, the Wood-

[1] The Birds of Indiana. A Descriptive Catalogue of the Birds that have been observed within the State, with an account of their habits. By Amos W. Butler. Report of the State Geologist of Indiana for 1897, pp. 515–1187. Indianapolis, Ind., 1898. Also separate, same pagination.

peckers, and numerous other species whose economic status has been considered in the various 'Bulletins' and other publications of the Division of Ornithology and Mammalogy. Throughout the treatise the utility and economic status of the species is kept well in view, and the work therefore cannot be otherwise than educational in the best sense to the people of Indiana, whether as an aid in determining the species or as a guide to their proper treatment. It is a hopeful omen of better times, not only for the birds but for the people, that a State legislature proves itself sufficiently far-sighted to place within reach of the public such an admirable aid to a better knowledge of their natural surroundings.

As is usual in recent works on North American birds, strict adherence is given to the nomenclature of the A. O. U. Check-List. — J. A. A.

Blanford's 'Birds of British India.'[1] — The first two volumes of the 'Birds of British India,' by Mr. E. W. Oates, were published in 1883, and volume III, by Dr. Blanford, in 1895; the present and fourth volume, also by Dr. Blanford, completes the series, which furnishes us with a most convenient and useful work on the Birds of British India, including Ceylon and Burma. "The number of Indian birds regarded as distinct species in the present work," says Dr. Blanford, "amounts to 1626." "The precise number," he adds "is naturally dependent on a personal factor, some writers being more liberal than others in admitting the claims to specific rank of races which are distinguished by small differences of plumage or measurement, or which are connected by intervening links with the typical form. Such races or subspecies, as they are called, have not, as a rule, been separately numbered and described in the present work, but they have received due notice and their characters have been explained." In other words, subspecies are not formally recognized, and form no part of the 1626 species. And, as said by a friendly reviewer of the work, "modern vagaries in nomenclature are not usually countenanced." Linnæus is taken at 1766, and in other respects the nomenclature is in accord with what this implies.

The present volume treats of 347 species (exclusive of 10 added in the appendix to those enumerated in the first three volumes), beginning with the Columbæ and ending with the Pygopodes. About a page is devoted, in the average, to each species, besides the space given to the higher groups; this suffices to give the principal bibliographical references, an

[1] The Fauna of British India, | including | Ceylon and Burma, | Published under the authority of the Secretary of | State for India in Council | Edited by W. T. Blanford, | — | Birds,— Vol. IV. | By | W. T. Blanford, F. R. S. | — | London: | Taylor and Francis, Red Lion Court, Fleet Street, | Calcutta: | Thacker, Spink & Co. | Bombay: | Thacker & Co., Limited | Berlin: | R. Friedländer & Sohn, 11 Carlstrasse, | 1898.— 8vo, pp. xxi + 500, and 127 figures in text.

adequate description, and a paragraph each on 'Distribution' and 'Habits, etc.' The work is thus in the nature of a 'hand-book,' and will prove invaluable to all interested in Indian ornithology. —J. A. A.

Gurney's 'The Economy of the Cuckoo.'[1]— Although so much has been written about the Common Cuckoo of Europe (*Cuculus canorus*), there are many points in its history, according to Mr. Gurney, still not well known. "Cuckoo's eggs," he says, "and all that appertains to them, is an inexhaustible subject when naturalists meet in conclave, and it is one which has a fascination for every oölogist .... Cuckoo's eggs often, but by no means always in this country, whatever may be the case on the Continent, bear a curiously protective resemblance to the eggs of the foster-bird. To the late August Baldamus belongs the credit of this discovery, though Professor Newton has pointed out that in the second century Œlian had almost arrived at the truth .... What is argued, by Baldamus and others since him, is that each individual Cuckoo is parasitic to one or two species, and has power to lay only one type of egg .... Further it seems reasonable to suppose that any Cuckoo will by preference lay in the nest of the species which brought her up. That each individual Cuckoo lays its own type of egg, season after season, and that in nineteen cases out of twenty it lays that egg on the ground, ... and taking it in its mouth flies or crawls to a nest already known, is established, and hardly requires any further proof .... That Cuckoos habitually carry away one or more of the fosterer's eggs is now beyond dispute, and they might be expected to continue watching a fosterer's nest which they had not yet robbed, in the hope of doing so." This is supposed to be their purpose when seen hanging about in the immediate vicinity of a nest they have chosen for the deposition of one of their own eggs, rather than solicitude for its safety.

Much proof is also advanced as to the egg-eating propensity of the Cuckoo, the mashed shells of at least seven eggs having been taking from the stomach of a single Cuckoo. The old Cuckoos are also accused of removing nestlings from the nest of the fosterer, and the charge is sustained by much circumstantial and some very satisfactory evidence, the purpose being apparently to secure more abundant nourishment for their own young.

It is a disputed question whether or not Cuckoos ever feed their own young. Mr. Gurney believes "that this departure from the Cuckoo's ordinary habits does take place under very rare circumstances," and that further verification of it will be forthcoming. Mr. Gurney also refers to the "supposed pouch" or "throat pocket" of the Cuckoo, for carrying

[1] The Economy of the Cuckoo (*Cuculus canorus*). By J. H. Gurney, F. Z S. Trans. of the Norfolk and Norwich Naturalists' Society, Vol. VI, pp. 365-384.

its egg, but seems to quite discredit its existence. He also refers to a kind of dimorphism in the plumage of the Cuckoo when young, "for it sometimes has a rufous plumage, and sometimes a very dark plumage." The red phase appears not infrequently to have a bright chestnut collar; "they are then called Hepatic Cuckoos, and are more often females than males."—J. A. A.

Eastman on 'Struthious Birds.'[1]—Dr. Eastman's paper consists of two parts, both of unusual interest. The first portion relates to a fossil egg of a Struthious bird found in the loess of northern China. This egg, with another which was broken, was found by a Chinese farmer, some five years ago, who took it to Kalgan and disposed of it to the Rev. William P. Sprague, an American missionary resident there. Last spring the egg was brought to this country by the Rev. James H. Roberts, by whom it was offered for sale in the interest of Mr. Sprague, and was eventually purchased for the Museum of Comparative Zoölogy, where it is now deposited. It has thus a thoroughly authentic history. The egg is about one third larger than the largest Ostrich egg, thus indicating that "the fossil egg must be the legacy of a larger bird than the Ostrich, and very likely one differing in other respects as well as size." As early as 1857 a similar egg was discovered in the Government of Cherson, in South Russia. This egg later fortunately fell into the hands of Professor A. Brandt of Charkow, who described it, under the designation *Struthiolithus chersonensis*, up to the present time a species known only from this fossil egg, and to which Dr. Eastman now refers the present specimen.

Ostrich remains (fragments of bones) have also been found in the Pliocene of the Siwalik Hills of India and in the Lower Pliocene of Samos, indicating a wide distribution of Struthious birds in early times. In commenting on these facts, Dr. Eastman says: "The occurrence of fossil Ostrich remains in the loess of such widely separated regions as Northern China and Russia has a direct bearing upon the distribution of Struthious birds. It enables us to speak positively with regard to the former extension of the Struthionidæ over Eur-Asia and Africa since the Pliocene, and gives rise to some inferences, within duly circumscribed bounds, regarding the past history of Raft-breasted birds in general. It is necessary to distinguish between what can be affirmed of the Ostrich group, properly speaking, and what we can assume with more or less plausibility concerning the rest of the so-called Ratitæ." He notes that "the best modern ornithological opinion holds that the division into Ratitæ and Carinatæ is unnatural, since the differences between existing

[1] On Remains of *Struthiolithus chersonensis* from Northern China, with Remarks on the Distribution of Struthious Birds. By C. R. Eastman. Bull. Mus. Comp. Zoöl., Vol. XXXII, No. 7, pp. 127–144 (with plate). August, 1898.

species of Raft-breasted birds are nearly as great as between any of the Ratitæ and Carinatæ." He summarizes the views of leading modern authorities on the relationships of the various extinct types of formerly supposed Ratite forms, and adds: "Strong enough arguments, we think, have been put forward to show that the theory of a common origin of the Ratitæ is untenable, and hence no single hypothesis of distribution is able to account for the facts of their distribution. We cannot imagine a race of Ostriches sprung from *Hesperornis* or anything of like nature in the Cretaceous, spreading over the whole earth in the Tertiary, and then as decay set in, leaving its fragments scattered in remote corners of the globe..... To seek the nearest Carinate affinities for the different sections separately; to develop the palæontological history of each more fully; and to inquire into the physical and biological conditions which led to their insulation, perpetuation, and differentiation in various provinces, — these are only a few of the points that invite an extended investigation." His review of the matter in the pages which follow is a suggestive and important contribution to the literature of the subject. — J. A. A.

Bangs on Birds from Colombia. — Mr. Bangs has recently published two papers[1] on birds received from Colombia, from his collector, Mr. W. W. Brown, Jr. The first relates to a collection of nearly 700 specimens gathered during the two months from the middle of December, 1897, to the middle of February, 1898, within fifteen miles of Santa Marta, at elevations ranging from 500 to nearly 6000 feet. The number of species and subspecies reported upon in this paper is 126, of which 10 are described as new, as follows: *Galbula ruficauda pallens, Melanerpes wagleri sanctæ-martæ, Dendrocincla olivacea anguina, Sycalis browni, Cyanocompsa concreta sanctæ-martæ, Arremonops conirostris canens, Piranga faceta, Cyclarhis flavipectus canticus, Dacnis napæa, Merula incompta.*

The second paper relates to a later sending, by the same collector, of birds taken "at the little village of Pueblo Viejo, in the high Sierra Nevada de Santa Marta, Colombia," at about 8000 feet altitude. This collection numbers 28 species, of which 4 are described as new, namely: *Elænia browni, Automolus rufipectus, Buarremon basilicus, Thryothorus lætus.* — J. A. A.

Nelson on New Birds from Mexico. — Further results of Mr. E. W. Nelson's ornithological work in Mexico have recently appeared. His

[1] On Some Birds from Santa Marta, Colombia. By Outram Bangs. Proc. Biol. Soc. of Washington, Vol. XII, pp. 131–144. June 3, 1898.

On Some Birds from Pueblo Viejo, Colombia. By Outram Bangs. *Ibid.*, pp. 157–160. Aug. 10, 1898.

first paper[1] is based on his exploration, in company with Mr. E. A. Goldman, of the Tres Marias Islands. After summarizing the work of previous explorers in these islands, he describes the following 11 new subspecies, based on his own collections, made during May, 1897:— *Columba flavirostris madrensis*, *Leptotila capitalis*, *Buteo borealis fumosus*, *Polyborus cheriway pallidus*, *Trogon ambiguus goldmani*, *Nyctidromus albicollis insularis*, *Myiopagis placens minimus*, *Cardinalis cardinalis mariæ*, *Vireo hypochryseus sordidus*, *Melanotis cærulescens longirostris*, *Thryothorus lawrencii magdalenæ*. The bird fauna as a whole will be treated later. In this connection he states that the study of his material in comparison with that from the mainland, shows "that most of the resident land birds of the islands..... differ in a more or less marked degree from their nearest mainland relatives. In most cases the island birds cannot be considered more than geographical races.... Not a single species has been found on the islands which has not a closely related form on the mainland."

In a second paper[2] Mr. Nelson describes a number of new birds from various parts of Mexico, from the collections made by Mr. Goldman and himself, for the U. S. Biological Survey. In reference to the diversified climatic areas of Mexico, Mr. Nelson states that in addition to the "two main divisions of highland or temperate, and lowland or tropical," "the highlands contain several definite faunal areas, and the same is true of the lower tropical lands." The new forms described are the following: *Heleodytes brunneicapillus obscurus*, from the Mexican tableland; *Vireo nanus*, southern border of the tableland in Michoacan; *Progne sinaloæ*, Plomosas, Sinaloa; *Phænicothraupis rubicoides roseus*, Territory of Tepic; *Amphispiza bilineata grisea*, southern part of tableland; *Guiraca chiapensis*, Chiapas; *Grallaria ochraceiventris*, San Sebastian, Jalisco; *Amazilia cinnamomea saturata*, Chiapas; *Dactylortyx chiapensis*, San Christobal, Chiapas; *Dactylortyx devius*, San Sebastian, Jalisco. The paper also comprises a revision of the genus *Dactylortyx*, in which *D. thoracicus* (Gambel) and *D. thoracicus lineolatus* (Gould) are recognized in addition to the two species here described.—J. A. A.

Cooke's 'Birds of Colorado.'[3]—The publication in March, 1897, of

[1] Descriptions of new Birds from the Tres Marias Islands, Western Mexico. By E. W. Nelson. Proc. Biol. Soc. Washington, Vol. XII, pp. 5–11. Jan. 27, 1898.

[2] Descriptions of new Birds from Mexico, with a revision of the genus *Dactylortyx*. By E. W. Nelson. Proc. Biol. Soc. Washington, Vol. XII, pp. 57–68. March 24, 1898.

[3] Further notes on the Birds of Colorado. Bulletin No. 44, Technical Series No. 4. An appendix to Bulletin No. 37. On the Birds of Colorado. By W. W. Cooke, Fort Collins, Colorado. March, 1898, 8vo. pp. 148–176.

Prof. Cooke's 'Birds of Colorado'[1] having "led to quite an extensive correspondence and in several cases the examination or re-examination of large series of specimens." The new information thus obtained has resulted in increasing the list of Colorado birds from 360, as given in Bulletin 371, to 374, a revised summary allotting the fourteen additional species to the various categories in which they belong. Additions are also made to the 'Bibliography of Colorado Ornithology,' and further notes are given relative to the distribution of species previously treated.— F. M. C.

Proceedings of the Delaware Valley Ornithological Club.[2]— This is the second 'Abstract of Proceedings' issued by the Delaware Valley Club, the first having been published in 1892. In the future it is proposed "to issue a yearly number covering the Proceedings with much greater detail." The present 'Abstract' shows an average attendance at the bi-monthly meetings of the Club of about sixteen members, gives the titles of the papers presented with references to their place of publication, if any, and other matters of interest to the Club, which is evidently a flourishing organization.— F. M. C.

Kearton's 'With Nature and a Camera.'[3]—This is an unusual book: its author has made a large amount of valuable information readable; its illustrator has accomplished surprising and inspiring achievements with the camera. We do not recall a more satisfactorily illustrated book, although from frontispiece to tailpiece every picture was made through a lens, and they not only furnish a record of facts which the worker with brush or pencil cannot hope to equal, but many of them possess a beauty rivalling the best productions of the natural history artist.

The first three of the eleven chapters of this noteworthy book treat of the human and feathered inhabitants of St. Kilda, the remaining eight are respectively entitled "Gamekeepers: Their Friends and Foes," "Nests, Eggs, and Young," "Where Birds Sleep," "Sea-Birds and their

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[1] See 'The Auk,' XIV, 1897, p. 331.

[2] Abstract of the Proceedings of the Delaware Valley Ornithological Club of Philadelphia. For the years 1892 to 1897. Published by the Club, 1898. 8vo. pp. 1–42.

[3] With | Nature and a Camera | Being the Adventures and Observations | of a Field Naturalist and an | Animal Photographer | By | Richard Kearton, F. Z. S. | Author of 'British Birds' Nests,' 'Birds' Nests, Eggs, and Egg-Collecting,' etc., etc. | Illustrated by 180 Pictures from Photographs | by Cherry Kearton | Third Thousand | Cassell and Company, Limited | London, Paris & Melbourne | 1898 | All Rights Reserved.—8vo. pp. xvi + 368, numerous half-tone illustrations.

Haunts," "How Cage Birds are Caught: A Day on Brighton Downs," "The Art of Duck-Decoying," "People We have Met," and "Our Methods of Photography." There is no padding, nor one poor or uninteresting picture, and while the birds mentioned are for the most part strangers to American readers, we commend the book and its author's and illustrator's methods as stimulating evidences of the results which may be obtained in a previously well-worked field by diligent, careful observation and persistent, patient effort. — F. M. C.

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NOTES AND NEWS.

THE SIXTEENTH ANNUAL CONGRESS of the American Ornithologists' Union will be held in Washington, D. C., beginning on the evening of November 14, 1898. This evening session will be devoted to the election of officers and members and the transaction of the usual routine business. Tuesday and the following days will be given to public sessions for the reading and discussion of scientific papers. Members intending to present papers are requested to forward the titles of their papers to the Secretary, Mr. John H. Sage, Portland, Conn., prior to November 6, in order to facilitate the preparation of the program of papers to be read before the Congress.

OSBERT SALVIN, an Honorary Member, of the A. O. U., who died at his home, Hawksfold, near Haslemere, England, June 1, 1898, was born at Finchley in 1835. A sketch of Mr. Salvin, published in 'The Zoölogist' for July, 1898, states that he was "the only surviving son of Mr

Anthony Salvin, a well-known architect. Shortly after graduating at Cambridge as Senior Optime in the Mathematical Tripos of 1857, he made a Natural History Expedition to Tunis and Algeria, in the company of Mr. W. H. Hudleston and Mr. (now Canon) Tristram, both of whom survive. In the autumn of the same year he made the first expedition to a country with which his life's work was to be largely associated; this was his visit to Guatemala, where he stayed chiefly in company with the late Mr. G. U. Skinner, the well-known collector of orchids, till the middle of 1858, revisiting the same region in about a year, and for a third time in 1861, in company with his friend and future coadjutor, Mr. F. D. Godman. After his marriage, in 1865, he with his wife made a fourth journey to Central America....

"From the foundation of the Strickland Curatorship in the University of Cambridge, in 1874, Mr. Salvin accepted and held that office until 1883, when he succeeded to the family estate....

"In association with his life-long friend Mr. Godman we see a capacity and love for scientific zoology combined with the accident of wealth which are phenomenal. The publication of the 'Biologia Centrali-Americana' is an unique event both in project and realization. Its conception not only proclaimed a devotion to zoological labour on the part of its editors, but declared an optimism in the expected assistance of other workers, which was generally seen to be amply justified. The expense of production would have strained the available finances of a small state, and would have required a financial vote — not likely to have been granted — of an enlightened empire. Such amounts are privately wasted every year, but seldom contributed to science, especially to such a sober and non-advertising science as zoology.... It is probable that it will be long before such an union occurs again as produced the 'Biologia,' and made the rooms in Chandos Street [10 Chandos Street, Cavendish Square, London] such a zoological rendezvous."

Mr. Salvin was a lepidopterist of note, as well as an ornithologist, his special field in entomology being the Rhopalocera, which group he elaborated in conjunction with Mr. Godman, for the 'Biologia.' His contributions to American ornithology appear to have begun in 1859, in joint authorship with Mr. P. L. Sclater, in a series of papers entitled 'On the Ornithology of Central America,' contributed to the first and second volumes of 'The Ibis,' the first of which, by an interesting coincidence, formed the first article of the first number of this eminent journal. From this date onward contributions to the ornithology of Central America, and later to that of South America by Mr. Salvin, either alone or jointly with Mr. Sclater, appear with great frequency in 'The Ibis' and in the 'Proceedings' of the Zoölogical Society of London, constituting highly important and voluminous additions to the literature of Tropical American ornithology. In 1866–69 was published the magnificent 'Exotic Ornithology, containing figures and descriptions of new and rare species of American Birds,' a folio volume in thirteen parts, with one hun-

dred colored plates. In 1873 appeared the well-known 'Nomenclator Avium Neotropicalium,' one volume, folio, by Sclater and Salvin. In 1876 Mr. Salvin published an important paper 'On the Avifauna of the Galapagos Archipelago,' in the 'Transactions' of the Zoölogical Society of London. In the same year appeared a series of papers in 'The Ibis,' on various genera of Hummingbirds, under the joint authorship of Mr. Salvin and D. G. Elliot. Mr. Salvin also later published many papers on Central and South American birds in conjunction with F. DuCane Godman, with whom he shared the editorship of that monumental work, the 'Biologia Centrali-Americana,' already mentioned. In 1876, 'A Revision of the Neotropical Anatidæ, by Sclater and Salvin, appeared in the 'Proceedings' of the Zoölogical Society, — a most valuable contribution to the subject.

Among Mr. Salvin's more important later publications are his contributions to the British Museum 'Catalogue of Birds,' of which his monographs of the suborders Upupæ and Trochili formed part of volume XVI published in 1892 (reviewed in this journal, X, pp. 66, 67), and the Tubinares, forming part of volume XXV, published in 1896 (reviewed in this journal, XIII, pp. 161, 162). The publication of the 'Aves' of the 'Biologia Centrali-Americana,' in joint authorship with Mr. Godman, began in 1879, the first part appearing in April of that year. Volume I[1] (4to, pp. 1–512, pll. i–xxxv) was completed in April, 1887, and Volume II (pp. 1–598, pll. xxxvi–lx) in February, 1889. The first part of Volume III the last that has come to hand, was issued in November, 1897, carrying the subject to the beginning of the Accipitres. It is to be hoped that the completion of this great work will not be greatly retarded by the death of the principal author. In addition to his other scientific labors Mr. Salvin was editor of the third series of 'The Ibis' (1871–76) and joint editor with Mr. Sclater of the fourth series (1877–82).

The unsurpassed collection of Central American and South American birds formed by Messrs. Salvin and Godman during their long period of exploration and study of the Tropical American avifauna was liberally presented by these gentlemen to the British Museum in 1885, where it forms one of most important of the many magnificent gifts by generous Englishmen to the Ornithological Department of this great Museum.

Mr. Salvin, although passing away at the comparatively early age of sixty-three, enjoyed a long period of scientific activity, including, what few ornithologists have enjoyed, an extended field experience in Tropical America, and his name will ever remain among the most prominent of those who have made this rich field the special subject of life-long research.

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[1]Parts I–IX were noticed in Vol. VI (July, 1881, pp. 174–176) of the 'Bulletin' of the Nuttall Ornithological Club, and Volume I as a whole in 'The Auk', VII, April, 1890, pp. 189–195.

OWING to impaired health Mr. W. A. Johnson, editor of the 'Osprey,' announces that he is compelled to abandon the publication of this interesting and popular journal, which we trust may fall into equally competent hands.

WE LEARN through the daily press that Mr. E. A. McIlhenny and his associates have reached Seattle, Washington, homeward bound from their expedition to Point Barrow, Alaska.

MR. HARRY C. OBERHOLSER is at present engaged in a revision of the American Horned Larks, and finding himself in need of further material from Lower California would be glad to receive specimens from there for examination. They may be sent to him, care of the Biological Survey, U. S. Department of Agriculture, Washington, D. C. The specimens will be properly cared for and returned within a reasonable time.

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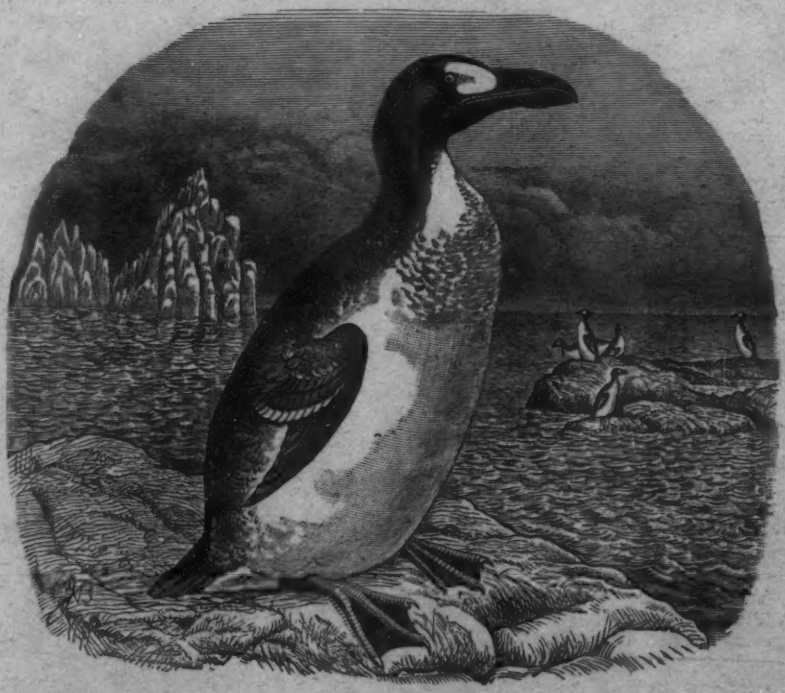

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